HASSELBLAD

User Manual
H4X

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H4x

Welcome to the Hasselblad H4X!

The sensational Hasselblad H4 models are the result of unwavering and continuous refinements to the H line of cameras. Developments have raised the bar for medium format photography, retaining Hasselblad's position in first place around the world.

The new H4X is designed to bring current H1 and H2 users up to a new level of functionality. Most of the latest H4 developments are now available whether you use Hasselblad digital backs, 3rd party digital backs or film magazines. Access to HCD lenses for use with film or 3rd party backs and access to the revolutionary True Focus function with all backs and film magazines are just two features in this extremely attractive model.

Hasselblad cameras, famed for quality and reliability, were chosen to record the lunar missions – there could hardly be better praise than that. Hasselblad continues the tradition of building on well proven technologies, refining and improving to raise standards, always to produce a better product. By using Hasselblad equipment you share the decision made by of some of the world's best and most famous photographers.

H4 features in abundance

The H4X is a marked step up for previous H1 and H2 owners. Many of the features from the H4 line are included, not least, True Focus. It is a very versatile model that allows the freedom of choice between using Hasselblad CF/CFH digital backs, third party digital backs as well as Hasselblad film magazines. The H4X is therefore a very serious contender in the medium format world that should appeal to a broad spectrum of photographers.

An impressive lens line

The highly renowned HC/HCD lens line includes 11 Auto-Focus lenses. The range is from 28mm to 300mm, 50-110mm zoom, 35-90mm zoom and 1.7x converter. They all employ central shutters, allowing flash to be employed at shutter speeds up to 1/500s. The central shutter also improves image quality by reducing camera vibration. And thanks to the large format of the H System cameras, there is a considerably shallower depth of field range, making it much easier to utilize selective focus to creative effect. In this way the full HC/HCD lens program is even further enhanced, bringing a new level of sharpness and resolution. (See under 'Lenses' for details about potential limitations concerning HCD lenses in combination with some digital/film backs).

True Focus

True Focus helps solve one of the most lingering challenges that faces serious photographers today: true, accurate focusing throughout the image field. The traditional solution for most DSLRs has been to equip the camera with a multi-point AF sensor but it only resolves some issues. To overcome this problem, Hasselblad has used modern yaw rate sensor technology to measure angular velocity in an innovative way. The result is the new Absolute Position Lock (APL) processor, which forms the foundation of Hasselblad's True Focus feature.

DAC *(for CF/CFH users only)*

Available with Hasselblad CF/CFH digital back use exclusively, 'Digital Auto Correction' (DAC), is an APO-chromatic correction of the images based on a combination of the various parameters concerning each specific lens for each specific shot, ensuring that each image represents the best that your equipment can produce.

Optional Accessories

H system accessories include general items such as filters, straps and lens shades etc., as well as specialist items such as the HTS 1.5 and the CF Adapter to really broaden your range. The HTS 1.5 tilt/shift adapter (optional accessory) delivers an easy to use, portable tilt/shift solution for five HC/HCD lenses ranging from 28mm to 100mm. The CF adapter (optional accessory) allows use of the classic CF-lenses from the Hasselblad V System. Have a look at the list towards the end of this manual for more details.

Phocus

Hasselblad Phocus is the free RAW file processor to complete and fine tune, primarily, Hasselblad raw (3FR) files from Hasselblad digital backs. However it is capable of importing other raw formats too, from a variety of manufacturers. You will find a copy of Phocus on the included DVD, or you can download it directly from the Hasselblad website.

Computer system requirements

Digital files naturally end up on a computer for processing. Image-storage and correction requires a certain minimum standard regarding computer capabilities. Large images will require a high-performance computer with plenty of memory, advanced graphics capabilities and a recent operating system. In most cases, the computer should include a FireWire connector, which will enable you to load images directly from the camera. To load images stored on the removable compact-flash card, you could instead use a compact-flash card reader, but FireWire is recommended for maximum flexibility.

Warnings and restrictions

- *Keep the H4X and computer equipment away from moisture wherever possible. If your camera becomes wet, disconnect from power and allow it to dry before attempting to operate again.*
- *Always take great care when you remove a digital back for cleaning as the exposed CCD sensor protective filter is vulnerable to damage.*
- *Keep all cables connected to or from your camera and computer out of the way where they will not be tripped over.*
- *Please keep purchase details and the warranty in a safe place.*
- *Familiarise yourself with the various parts and components. Leave protective covers on as much as possible and avoid touching glass surfaces and inserting fingers into the camera body. Hasselblad cameras have a robust construction and are capable of withstanding fairly rough treatment but nevertheless are precision instruments and will serve you longer if treated with respect from the beginning.*
- *Finally, please check occasionally on the Hasselblad website – www.hasselblad.com – for any firmware and software updates, news, tips, user manuals or other information.*

H4x

1

General overview
– *controls*

This section provides an introduction to the control buttons' functions as well as the information provided on the display screens.

Photo: Claudio Napolitan / Hasselblad Masters

Button functions – overview

Below is an overview of the primary functions of the control wheels and buttons. Some controls have dual or triple functions according to the state of the menu or setting. A full description can be found further on in this manual.

Shutter release button

Releases shutter. Also activates camera from standby mode.

FLASH / (CONTROL LOCK) button

Locks settings to avoid inadvertent change. Also accesses flash settings as well as acting as Exit button.

AF button

Accesses focus modes.

DRIVE button

Accesses ISO and White Balance settings. Also acts as Save button.

Front control wheel

Accesses and changes various settings.

MENU button

Accesses menu.

Illumination/Battery status button

Illuminates grip display. Accesses battery status and general information screen.

ON.OFF (PROFILES/ESC) button

Turns the camera on and off. Accesses Profiles and acts as escape button for other functions.

Rear control wheel

Accesses and changes various settings.

M.UP button

Raises and lowers mirror. Can be reassigned to another function.

Remote release cord port

For attaching a remote release cord (electrical).

STOP DOWN button

Stops down aperture to current setting. Can be reassigned to another function.

True Focus button

Activates True Focus function. Can be reassigned to another function.

Format button

Re-formats CF card.

AE-L button

Locks light reading made in both automatic and manual exposure modes. Can be reassigned to another function.

Eyesight correction adjustment wheel

Adjusts viewfinder image to suit individual eyesight.

EV correction adjustment button

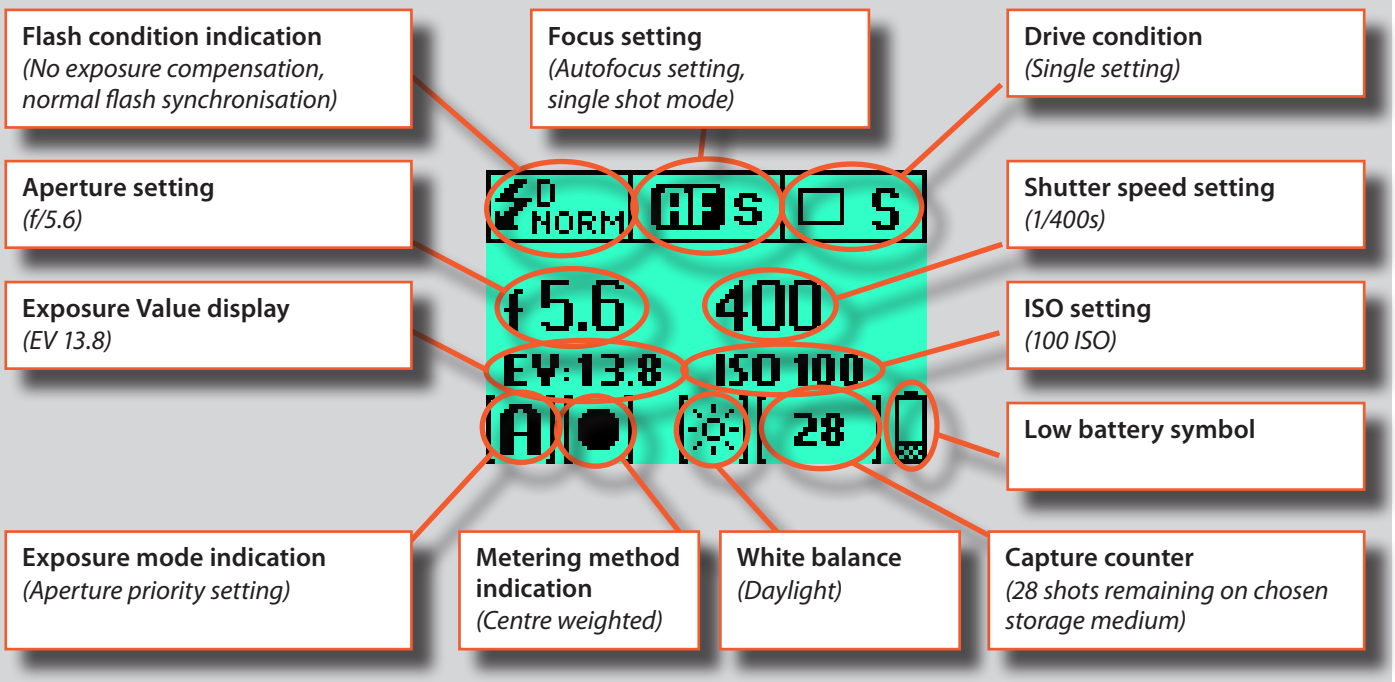
Produces EV exposure compensation.

EXP button

Accesses exposure mode and metering method.

Grip display – overview

Example of typical camera grip display



Typical camera grip display when changing settings.

Command indication

The upper row on the screens describes commands (which change according to the setting). The button immediately above each command effects the change. So in this case, for example, you would press the **FLASH** button to 'exit' from the screen. See note below.

Settings symbols

Symbolize the options available when settings are changed. The active symbol is depicted by a drop shadow.

Control wheel description and direction

Arrowheads symbolize which control wheel should be used to change the setting they are beside. In this case, the Bracketing option is chosen by the front control wheel and the number of captures in that option is chosen by the rear control wheel.

◀...▶ = front control wheel

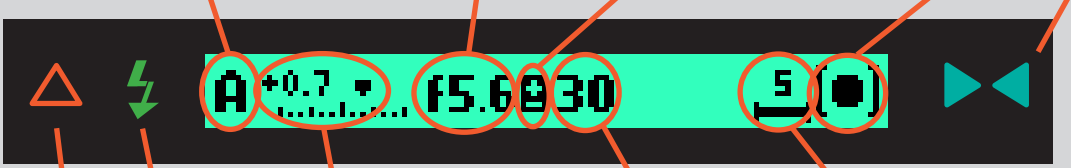
▲▼ = rear control wheel

Setting information

The lower row on the screen displays information about the current state of the setting. In short, the upper row displays what you can do, and the lower row displays the current state of settings or what you have done.

Viewfinder display – overview

Typical viewfinder display. Note the LEDs will only be visible when activated (by the camera or a setting).



Exposure method indication *('aperture priority' mode)*

Aperture setting *(f/5.6)*

Exposure compensation setting reminder symbol

Metering method setting *(Centre weighted)*

Focus Assist LED

Flash LED

Warning triangle LED

Exposure compensation setting *(+0.7 EV)*

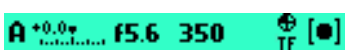
Shutter speed setting *(1/30 second)*

Capture counter

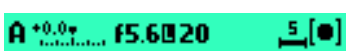
True Focus *and* ***HCD crop*** *icons appear on right hand side of display when functions are activated.*

Some examples of various viewfinder displays

Standard settings



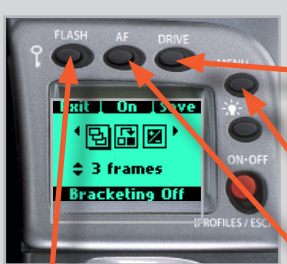
Normal screen with ***True Focus*** *activated.*



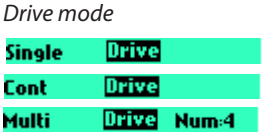
Normal screen with ***AE lock*** *activated.*

Normal screen with exposure compensation set.

Viewfinder display according to setting

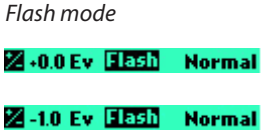


Drive mode

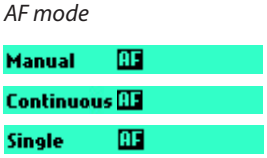


Menu mode

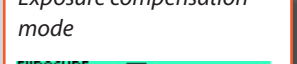
Flash mode



AF mode



Exposure compensation mode

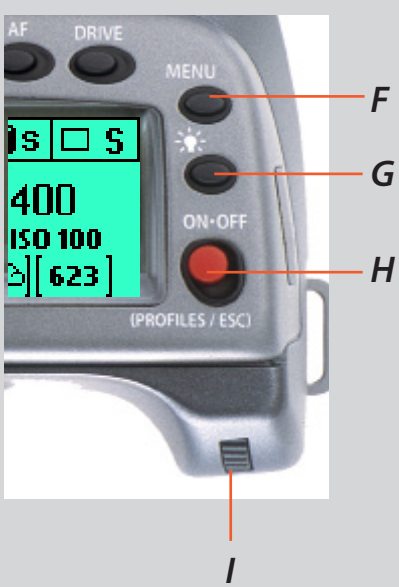


Exposure method and metering method mode examples

etc. where:

A = *Aperture priority*
S = *Shutter priority*
P = *Program*
Pv = *Program (variable)*
M = *Manual*

Centre Weighted = [●]
CentreSpot = [⊛]
Spot = [•]



Buttons and controls – details

Shutter release button — A

This button has **half-press** and **full-press** positions. By pressing half-way (or softly) the camera, auto focus function and exposure meter can be activated. By pressing all the way down (or more firmly) the shutter will be released (or the chosen exposure procedure for example, the self timer is activated with this button).

FLASH / (CONTROL LOCK) button / (EXIT) — B

This is a triple function button. If you press the button for one second, the beeper will sound (if set) and a key symbol will appear on the grip display signifying that the controls (except the shutter release) have been locked and therefore cannot be altered unintentionally in use. Press the button for one second again to unlock (this function can be altered to lock all controls or control wheels only in **Custom Options #18**).

Quickly clicking the button will access the flash settings information on the display from the main screen. See under ***Flash /Strobe - controls and displays*** for full details.

This button also acts as the **EXIT** button for many other settings including an **EXIT** button when navigating the digital back menu.

AF button / (ON) / (SEL.) — C

This is a triple function button. Press this button to directly access the autofocus/manual focus choice screen from the main screen. See under ***Lenses*** for full details. It also acts as the **ON** and **SEL.** (= select) buttons for many other settings.

Drive button / (SAVE) / (ENTER) — D

This is a triple function button. It provides direct access to the Drive settings (see under ***Lenses*** > ***Drive*** for full details).

It also acts as the **SAVE** and **ENTER** buttons for many other settings as well as an **OK** button when navigating the digital back menu.

Front control wheel — E

The front and rear control wheels are used to make changes in exposure settings, access the grip menu for settings as well as navigate the digital back's menu. The effect of the wheels' direction is customizable.

MENU button — F

Accesses the first level of the menu for settings changes.

Illumination/Battery status button — G

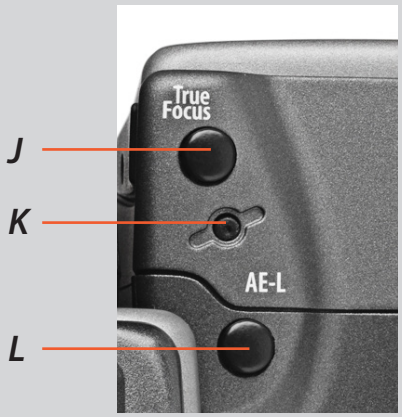
Press to illuminate the display. Remains active until camera enters standby mode. Hold down to access battery status/general information screen.

ON.OFF (PROFILES/ESC) button — H

Press the button for 1 second to activate the camera. The H4X start-up logo will appear and then the main screen. After a few seconds (customizable) the camera will enter **Standby** mode.

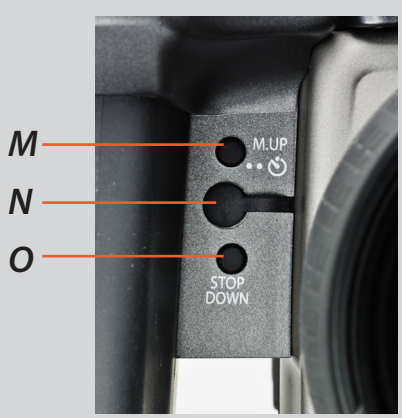
A long press of the button will turn the camera off completely (even from **Standby** mode) signified by an audible signal (if set). A quick 'click' on the button will access the **Profiles** section of the menu from the main screen.

Note the difference in results between a long press and a quick click of this button.



Note

Reassignable buttons are particularly useful and can save you a great deal of time and effort. You are advised to investigate their potential fully. See **Custom Options** *for full details.*



Rear control wheel *I*

The front and rear control wheels are used to make changes in exposure settings, access the various loop sections of the menu for settings as well as navigate the digital back's menu. The effect of the wheels' direction is customizable.

On the rear of the grip, as well as the rear control wheel, there are a further three control buttons:

True Focus *J*

Activates the **True Focus** setting. See under ***Lenses / True Focus*** for explanation of this function.

Format button *K*

Re-formats a CF card. Purposefully recessed to prevent unintentional use. Dialogue appears for confirmation.

AE-L button *L*

This button can lock a light reading made in both automatic and manual exposure modes. It can also be used in **Zone** mode to take a new reading.

Can be reassigned in* Custom Options *to another function.

See under **Light Metering & Exposure Control** / ***AE-L button*** for full details.

On the front of the grip there are two more control buttons plus the remote cord release port:

M.UP button *M*

Press this button to raise the mirror and press again to lower it (toggle function). A quick double press of the button (two within a half second) will immediately access the **Self timer** function.

Can be reassigned in* Custom Options *to another function.

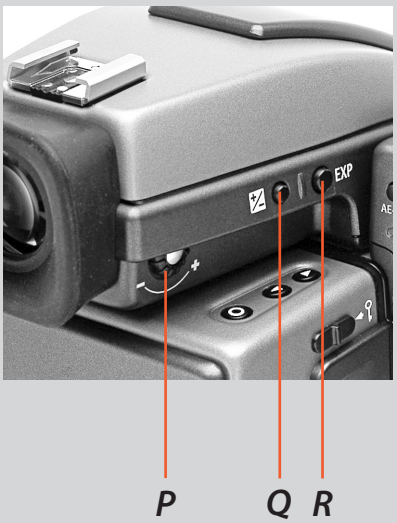
Remote release cord port *N*

For attaching a remote release cord (electrical). The Hasselblad accessory jack plug socket is protected by a captive rubber plug.

STOP DOWN button *O*

Press this button to make a visual check of the depth-of-field on the viewfinder screen at the chosen aperture. The aperture will close according to the setting and remain closed as long as the pressure is maintained. You can alter the aperture at the same time to see the changes taking place.

Can be reassigned in* Custom Options *to another function.



There are also two control buttons on the viewfinder, as well as the eyesight correction adjustment wheel:

Eyesight correction adjustment wheel *P*

The personal eyesight adjustment facility has a diopter range of -5 to +3.5, to suit most users.

EV correction adjustment button *Q*

Press this button to access the EV compensation screen. Settings are made with either the front or rear control wheels. An EV correction symbol appears on the grip and viewfinder display as confirmation.

EXP button *R*

The **EXP** (Exposure) button accesses the exposure mode and metering method options screen. Settings are made with the front and rear control wheels and the appropriate symbols appear on the grip and viewfinder displays accordingly.

Audio feedback

There are 14 different sounds to help provide immediate information. A button press has a normal mechanical 'click' sound while the remaining actions listed here are more musical. For example, a capture rated as overexposed is signified by three rapid notes going up the musical scale, whereas an underexposed capture has three rapid notes going down the musical scale, as illustrated here.

See later section about available options on the digital capture unit for activation and volume control.

ON:

OFF:

Error:

Ready:

Low Battery:

Overexposure:

Underexposure:

5 images left:

1 image left:

Media full:

IAA yellow:

Overwrite red:

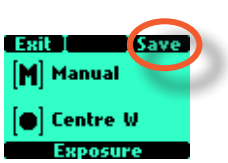
Transfer complete:

Saving settings changes on the grip

The basic principle behind making changes is that the appropriate button is first pressed to access the menu and then settings altered by way of the control wheels. The appropriate control wheel is designated by arrowheads alongside the setting description.

- *Some buttons have a toggle function, the ON.OFF button has a quick 'click' action as well as a longer (half-second) 'press' action and the shutter release has two positions: 'half-press' and 'full-press'.*
- *Several buttons on the grip are multifunctional, according to the state of the menu. In the example illustrated here, the FLASH button functions as the EXIT button, the AF button functions as the ON button and the DRIVE button functions as the SAVE button.*
- *The front and rear control wheels can also be used to navigate the menu on the digital back.*
- *At very low temperatures the displays require a few seconds to present new settings.*
- *The control wheels are also used to navigate the menu on the digital back.*
- *The FLASH button also acts as an EXIT button and the DRIVE button acts as an OK button when navigating the digital back menu.*

Examples



The following is a list of the various terms describing the various actions that appear in the menu (on the grip display):

Enter: moves screen down one level on the menu.

Exit: moves screen back up one level on the menu. Does not save any settings.

Off: deactivates the particular function being set.

On: activates the particular function being set.

Sel.: (Select) - selects the character marked for image info and profile name

ESC: (Escape) - terminates an action and returns to the main screen. Does not save any settings.

Save: saves a setting and also moves screen back up one level on the menu. Can save many changes made in a setting sequence.

Remember the following groupings of 'saved' and 'not-saved' actions when making settings changes:

SAVED

'Quick save' - half-press shutter release button

Save - press save button (DRIVE button)

NOT SAVED

Escape - press ESC button (PROFILES /ESC button)

Exit - press exit button (FLASH button)

H4X

2

Camera Body

Photo: Bang Peng / Hasselblad Masters

- **Aluminium cast in one piece**
- **Stainless steel shell**
- **Integral quick-coupling plate**
- **Upgradeable firmware**
- **Modular design**
- **Integral ergonomic grip**
- **Pixel based user interface**

The H4X camera body is a robust construction of cast aluminium with a stainless steel shell for extreme durability.

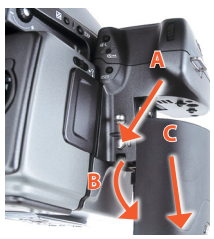
The integral ergonomic grip houses the main control interface and also contains the battery holder. The camera body also contains the viewfinder screen, which can be easily removed or exchanged without the use of special tools or adjustment procedures.

Please take extra care when handling the camera body without a protective cover or the digital back in place to protect the auxiliary shutter. Likewise, the front opening of the camera body reveals the mirror when unprotected by a cover or lens. Do not touch or attempt to clean the mirror yourself – marks or dust particles will not impair results in any case. More noticeable problems, however, should be taken care of by a Hasselblad Authorized Service Center.

1

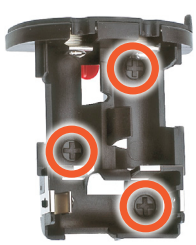
2

3



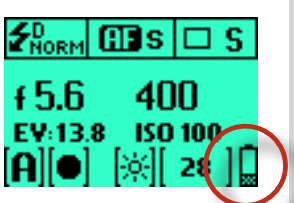
4

5



6

7



8

Carrying strap *1, 2*

The carrying strap is attached by firstly withdrawing the safety collar. The hook is then freed and attached to the strap lug (fig. 1). Slide back the safety collar (fig. 2) to ensure the hook remains in the locked position between the small protruding lugs. The collar is purposely a tight fit and might need some effort to slide.

Removing and attaching the battery holder *3*

The H4X requires batteries for all actions. There is no mechanical reserve facility so it advisable to always have a spare set of batteries. As is normal, you might want to keep a reserve set of batteries in a warm place when working in very cold conditions.

Remove the battery holder by depressing the the battery holder button (A) and simultaneously swinging the battery holder retaining lever (B) down until it stops. Pull battery holder downwards (C).

To attach ensure the battery holder is flat against the camera grip and, aligning the two upper lugs with the slot in the grip, slide it back into position as far as it will go. Swing back the battery holder retaining lever until it clicks back into place.

Fitting the batteries *4, 5, 6*

With the battery holder removed, press the red battery cassette retaining button inwards on the holder to release the battery cassette . Load three CR-123 lithium (or equivalent) into the cassette, ensuring the polarity of each battery is correctly oriented (see the '+' markings on the batteries and the cassette). Re-insert the cassette into the battery holder, ensuring that it is seated properly in place and that the red button returns fully into the locked position.

Battery life *7, 8*

Battery life is dependent on a number of variable factors and therefore cannot be exactly predicted.If the camera is left in the active state instead of standby for long periods, for example, then the battery will become exhausted much faster. A low-battery state is indicated as a symbol on the grip LCD (fig. 7).

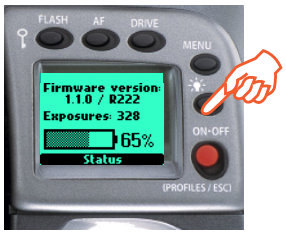
When the batteries are almost completely exhausted, a warning message 'Replace battery' will appear on the grip LCD (fig. 8). The camera will not function at all when this message appears and battery change is essential.

Note

*When the **Low battery** icon appears (as in illus 7), the camera automatically enters a temporary power-saving mode. This is recognizable by a slower pace for all the actions in a capture sequence. The camera actions also sound differently.*

This mode is designed so that you can continue working for a while, even though the power remaining in the battery is too low for working in the normal manner. Naturally, you should replace the battery as soon as possible to restore normal action again.

9



Battery status (Battery grip rechargeable 7.2V Li-on only) 9

With a 'Battery grip rechargeable 7.2V Li-on' (optional accessory) fitted an immediate full-screen information and battery status check appears on the grip display by holding down the illumination button. This screen displays:

- the firmware version
- the number of captures taken since the last battery recharge / change.
- a rechargeable-battery status icon that provides a quick visual check as well as a figure estimate in percent.

The information regarding the number of captures taken is intended to help you make an estimate of the number of possible remaining captures according to your way of working. For example, if you regularly browse a great deal when shooting or you leave the camera in ON-mode with no standby, you would naturally expect to drain the battery sooner than others who don't. You should soon be able to build up a picture of how you usually work and can therefore estimate that after X number of captures, you normally expect to be able to take Y captures before the battery is exhausted (when working in a similar manner in similar conditions).

The percentage information, however, provides another kind of estimate based more on the amount of power left in the battery rather than on your normal way of working.

Remember that these are only estimates and that there are a number of factors affecting remaining battery, ambient temperature for example, as well as general practice.

Power

The camera can be set at two active power modes – **ON** or **Standby** – as well as **OFF**. In active modes, battery consumption is least in **Standby** mode and most in **ON** mode. The camera enters **Standby** mode to conserve battery consumption after 10 seconds (Default) but can be changed in ***Custom Options #1***. Both the grip and the digital back displays are dimmed accordingly. The digital back can be set to become independently inactive in **Power Down** (***Menu > Settings > User Interface > Power Down***).

Note that after 1 hour of complete digital back inactivity in power down mode, the camera body will automatically shut down too. Restart by pressing the **ON.OFF** button on the grip as normal.

ON

To activate the camera press the red **ON.OFF** button until you see the start-up H4X logo appear on the grip display. The logo is automatically followed by the main screen. The camera is now in **ON** mode.

After a set period of inactivity (programmable in Custom Options) the camera automatically enters **Standby** mode, signalled by the appearance of the H4X logo again.

Standby

In this mode the camera is in a mainly inactive **Standby** mode and is ready to be immediately reactivated to the **ON** mode by:

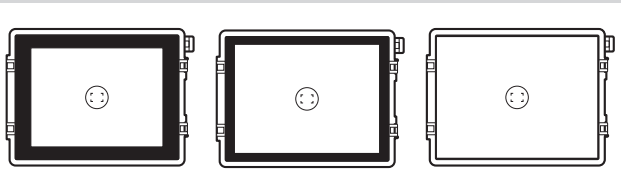
- ***pressing the shutter release button half way***
- ***pressing the* Stop down *button***
- ***clicking the* ON.OFF *button***
- ***pressing the* Mirror up *button.***

In this mode, signalled by the standby H4X logo appearing on the grip display, the demand on the batteries is very low. It is ideal for general use where intervals between shots exceed a few seconds.

Standby mode is automatically set from the **ON** mode after 10 seconds (default) of inactive use (programmable in ***Custom Options #1***).

16

17



Viewfinder screens showing the difference in masking and composition frame marking. Type varies to match sensor size. See under ***Accessories*** for other types (with grid pattern, for example).

18

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OFF

From the active screen, press (not click !) the red **ON.OFF** button for a half second. All buttons (except the **ON.OFF** button) remain ineffective, producing virtually no demand on the battery. This is the normal mode when transporting or storing the camera or where there might be a risk of inadvertently activating the camera. (However, remove the batteries if you are going to store the camera for a period of more than a few weeks).

In this mode neither the viewfinder display nor grip display information is available.

Viewfinder screen *16, 17*

The H4X is fitted with a Spherical Acute-Matte D viewfinder screen for extreme brightness, clarity and even illumination. An optional accessory screen with a grid pattern is also available.

To change a viewfinder screen, remove the viewfinder to access the viewfinder screen. To remove the screen, place the tip of a ballpoint pen or similar in the viewfinder screen removal lug and pull upwards. To replace the screen, position the right side of the screen in place so that it sits correctly in the recess. Place the tip of a ballpoint pen or similar in the viewfinder screen replacement indentation and press downwards until the screen snaps into position. Try to avoid touching either surface of the screen with bare fingers.

Note

Do not attempt to clean the screen by immersing it in water, or use any kind of cleaning fluid. If the screen becomes damp, do not use hot air to dry it. Use a soft cloth on the upper surface only. Seek advice from an Authorized Hasselblad Service Center if the screen becomes particularly soiled. Remember that particles or greasy marks on the screen might impair the viewfinder image but have no effect whatsoever on the recorded image

Accessory connection *18, 19*

On the left hand side of the camera body are two accessory-retaining screw threads (M5), as well as a databus connector, protected beneath a cover.

The cover can be removed by inserting a pointed object, such as a pen, in the small hole and then sliding it to the left, as in the illustration. The cover-retaining clip can then also be removed to access the connector.

PC-connector *20*

A PC connector for non TTL-flash synchronisation is located on the left side of the body. It is protected by a captive rubber plug.

Protective base plate *21, 22*

To attach the protective base plate, slip it over the camera foot until it stops. To remove it, lift the securing catch while pushing the plate back towards the lens.

H4x

3

Viewfinder

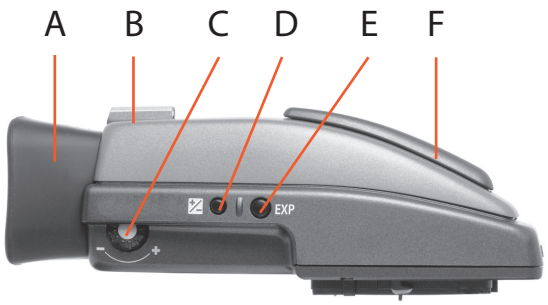
Photo: Joao Carlos / Hasselblad Masters

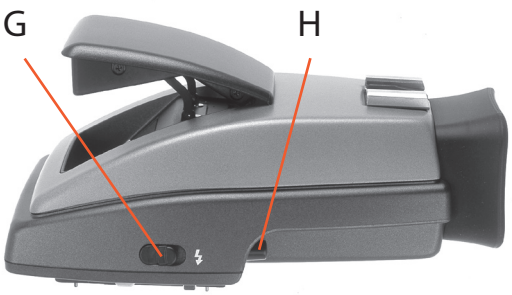
- **Multi-mode light metering**
- **Full exposure information**
- **100% image**
- **90° viewing angle for eye-line composition**
- **Full image for spectacle wearers**
- **Integral diopter adjustment**
- **Integral flash unit**

The viewfinder provides a laterally corrected 100% image at eye-line level. It features a wide-range diopter adjustment to suit most users. The viewing distance is designed to provide full frame view even for eyeglass wearers. The bright Spherical Acute-Matte D focusing screens (located in the camera body) are interchangeable to suit preference, each of them naturally indicating the spot light-metering area for accuracy in exposure calculation. The information display located beneath the viewing frame is continually updated and visible and is back lit for optimum visibility. This display also duplicates much information visible on the grip display for immediate checking. In addition to the display, there are four LEDs providing general warnings, flash and focus information. The viewfinder also features a pop-up fill-flash unit for added convenience.

See the **Camera Body** section for details about the viewfinder screen. The exposure compensation button and exposure button are described in the **Light Metering & Exposure Control** section.

Parts and components – HVD 90x & HV 90





A. Rubber eye cup
B. Hot shoe
C. Eyesight adjustment wheel
D. Exposure compensation button
E. Exposure method / mode button
F. Integral flash unit
G. Flash unit release button
H. Viewfinder release button

1

2

Note

There are three compatible viewfinder models – HVD 90x, HV 90x and the HV 90X-II The HVD 90x, however, is not compatible with film magazines as it does not display the whole image.

User functions are the same for both models.

Attaching and removing the viewfinder 1

While holding the viewfinder at a slight angle and resting it on the top of the camera, slide the viewfinder forward until the front locating pin is in position in the recess in the front edge of the viewfinder screen aperture on camera body. Press the rear part of the viewfinder firmly downwards until it clicks into place.

Ensure that both sides of the viewfinder are seated correctly and that it has been firmly attached and locked into position. Failure to do so could cause an intermittent malfunction if the databus interface connections between the viewfinder and camera body are not positively secured.

To remove, grasp the viewfinder in the right hand and while depressing the viewfinder release button, lift the rear of the viewfinder up and away from the camera body.

Eyepiece adjustment 2

No corrective lenses are needed to adjust the eyepiece to suit most requirements. The diopter range is from -5 to +3.5D. Eyeglass wearers can rapidly and accurately change the settings according to whether they wish to wear eyeglasses for viewing or not.

Personal eyepiece adjustments can be carried out by pointing the camera at the sky or similar smoothly toned area. While holding the camera in your left hand, you can with your right thumb turn the adjustment wheel until the markings on the viewfinder screen reach the optimum sharpness for your eyesight.

If you normally wear eyeglasses for distance viewing and intend to wear them for camera use then do not remove them for the above procedure. If, on the other hand, you prefer to remove your eyeglasses for camera work, then repeat the above procedure without wearing your eyeglasses.

Rubber eye cup

Two rubber eye cups are available for the H4X. The one supplied is suitable for users who do not intend to use eyeglasses when photographing. The second shorter eye cup is for those who either prefer to position their eye further from the viewfinder and those who wish to wear eyeglasses.

The eye cups can be rapidly changed by a Hasselblad Authorized Service Center.

Integral flash unit

See under ***Flash*** for full details.

H4x

4

Film Magazine

Photo: Mark Zibert / Hasselblad Masters

The 16-32 film magazines are sophisticated independent units within the H system. They allow the use of 120 or 220 film. Features include automatic film advance, wind on and wind off. A display provides information while some settings data can be printed on the edge of the film for archival purposes.

Film magazines not only provide for special requirements in technical applications but also allow a broader spectrum of expression for creative work.

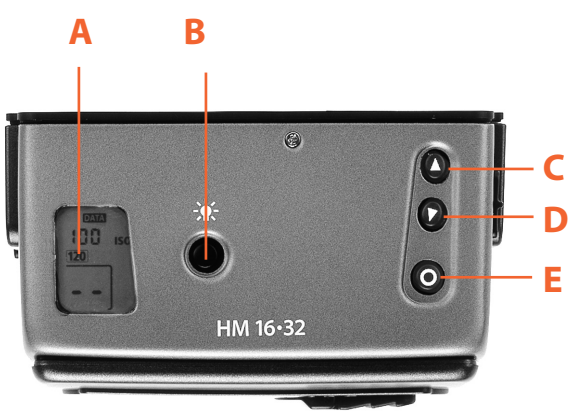
HM 16-32 Film Magazine

The HM 16-32 film magazine is a sophisticated semi-independent unit within the modular H-system. It has its own power supply for individual information storage, LCD panel, illumination, etc.

Much information is transmitted and received between the magazine and the camera body, so ensure the databus connection is kept clean and not damaged in any way. It is advisable to fit the magazine protective cover when storing a film magazine to protect both the databus connection and the darkslide.

The features include:

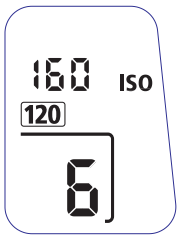
- Automatic 120/220 compatibility
- Automatic wind on / wind off
- Automatic film advance
- LCD information panel
- Integral darkslide
- Customizable data imprinting
- Illuminated LCD
- Barcode recognition
- Count-up or count-down film frame reminder choice
- Multi shot option



Parts and components

A.	LCD panel	G.	Darkslide key
B.	LCD illumination button	H.	Darkslide indicator
C.	Change up button	I.	Film tab holder
D.	Change down button	J.	Film holder key
E.	Function selector	K.	Magazine settings lock
F.	Film plane index	L.	Databus interface

A

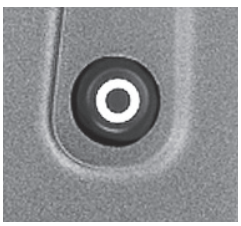


B

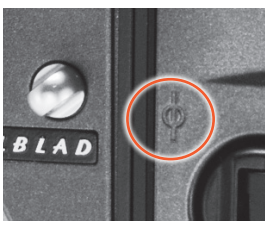
C

D

E

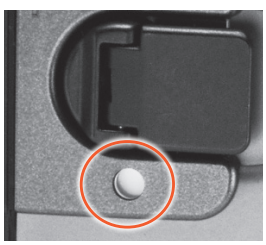


F



G

H



Note

Changes can only be made when the settings lock switch is in the unlocked position.

Note

The darkslide can only be withdrawn when the magazine is attached to the camera.

LCD panel — *A*

The various functions are accessed by repeatedly pressing the function selector button (loop menu) and changes made by the 'change-up' and 'change-down' buttons. Any settings are automatically saved. At very low temperatures the LCD will require a few seconds to display new settings.

LCD illumination button — *B*

The LCD can be illuminated by pressing the display illumination button, which is accessible when the magazine is not attached to the camera. The LCD will remain illuminated all the time you keep the button depressed, up to a maximum of 10 seconds. After 10 seconds has expired, you must release the pressure on the button and press again to obtain a further 10 second period of illumination. Remember that using the illumination function very often will noticeably shorten the life of the battery in the magazine.

When the magazine is attached to the camera, the button on the magazine is inaccessible but you can still illuminate the LCD by pressing the illumination button on the grip instead.

Change up button — *C*

Can change the settings 'upwards'. For example, to increase the film speed setting. Toggle action.

Change down button — *D*

Can change the settings 'downwards'. For example, to decrease the film speed setting. Toggle action.

Function selector — *E*

Selects the four functions that can be set on the magazine. The functions are on a menu loop so that repeated pressing of the selector button will successively access all functions in turn. After a time-out of five seconds of non-activity, the display returns to the main screen.

Film plane index — *F*

Provides a measuring point for the actual position of the film plane in the magazine. Used for calculations in critical applications.

Darkslide key — *G*

Withdraws and replaces the darkslide. Fold out the key and turn it counter-clockwise 360° (towards the open ⋐ symbol) to withdraw it and clockwise 360° (towards the closed ⋑ symbol) to replace it.

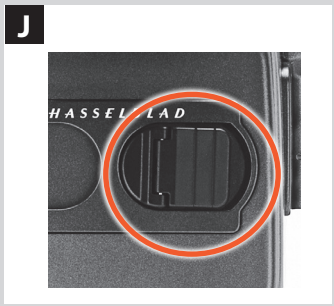
Darkslide indicator — *H*

Indicates whether the darkslide is in place or withdrawn:

RED = **stop!** = *exposure* **CANNOT** *be made*
(magazine can be removed from camera)

WHITE = **ok!** = *exposure* **CAN** *be made*
(magazine cannot be removed from camera)

If you attempt to make an exposure when the darkslide is closed, however, you will receive a warning message in the viewfinder and grip LCDs – 'The darkslide is closed'.



Film tab holder *I*

Holds an ID tab from the film roll pack as a reminder of the type of film loaded. Don't forget to change it if you change film type!

Film holder key *J*

Secures the film holder in the magazine. Fold out the key and turn counter-clockwise 90° to remove the film holder and turn clockwise 90˚ to lock the film holder in place.

Magazine settings lock *K*

All settings can be locked to avoid inadvertent changes. To change the settings, slide the settings lock (see illus) to the right until it stops. After the changes have been made, slide the settings lock to the left (see symbol on magazine) again to secure the new settings.

Databus interface *L*

Data interface between magazine and camera. Ensure the contacts are kept clean and protected from damage. Keep the protective cover on when the magazine is being stored or transported.

Operation

Battery

The magazine uses a battery to retain information and settings when unattached from the camera. When attached to the camera body, the magazine takes its power requirements from the camera batteries. The magazine battery will normally be effective for 1-2 years depending on use (off camera illumination, for example). When the battery is in a very low condition, (approx. 1 month of use left), a low-battery symbol appears on the magazine LCD as a warning. The magazine will continue to function with no battery power left as long as it remains attached to the camera body. However, when detached, the settings will not be stored.

Battery replacement *1, 2*

Release the film holder by folding out the film holder key and rotating it 90° in a counter-clockwise direction. Withdraw the film holder completely. On the bottom plate on the inside of the film magazine housing you will find a slotted circular battery cover. Insert a small coin or similar into the slot and rotate the cover about 20° in a counter-clockwise direction. The cover will be freed and the battery can be removed. Replace with a fresh CR2032 / 3V lithium (or equivalent) battery. Observe the polarity and ensure the positive (+) face is uppermost and replace the cover (ensure the retaining lugs are inserted in the battery compartment slots), locking it into place by rotating it in a clockwise direction until it stops. If you inadvertently insert the battery incorrectly, the film magazine will not be damaged though it will not function. Try to avoid touching the surface of the battery with your bare fingers as sweat residue can decrease the electrical conductivity of the battery casing and might cause corrosion.

After battery replacement, the magazine's parameters return to the default settings (Barcode, 120, Data-on, Count up).

3

4

Attaching and removing the magazine 3, 4

You cannot remove a magazine from the camera body if the magazine darkslide is not in place, (when the magazine darkslide indicator on the magazine shows white). Neither can you withdraw the magazine darkslide when the magazine is not attached to the camera. Both these restrictions therefore prevent accidental film loss caused by fogging.

Attachment

Position the magazine retention groove onto the magazine support on the camera body ensuring that they are correctly positioned. Swing the magazine towards the camera body and firmly press into place with a click. If there is resistance, the magazine retaining catch on the camera has probably been inadvertently released. In that case, push the release button again to reset the catch.

You can attach and remove the magazine with or without the film holder in place. If you just want to change to a new film, you can remove and reload the film holder without having to remove the whole magazine.

Removal

Ensure that the darkslide indicator on the magazine shows red (signifying that the darkslide is closed). Firstly push the lever of the magazine release button to the right (fig. 4/1) and while maintaining that position press the centre of the button firmly inwards towards the camera body (fig. 4/2) to finally release the magazine.

Note

If the film holder is inadvertently removed mid-film, then exposed frames will naturally be lost due to light fogging. However, if the film holder is re-inserted, the film will automatically be advanced by three frames to position fresh unexposed film. The film counter will also correspondingly add on three frames to the original number recorded before the film holder was removed.

Note

You cannot remove a magazine if the darkslide is not closed.

Note

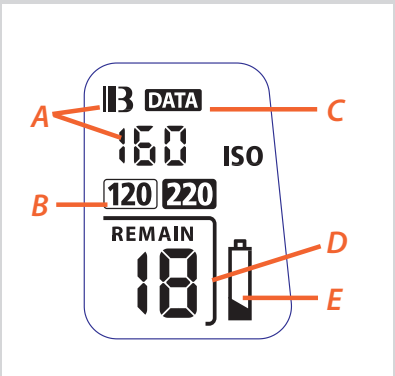
Film settings (ISO / film length) are automatic only if the magazine is set at Barcode automatic. That is, a barcoded film cannot override a manual film speed setting but a manual setting can override the film speed of a barcoded film.

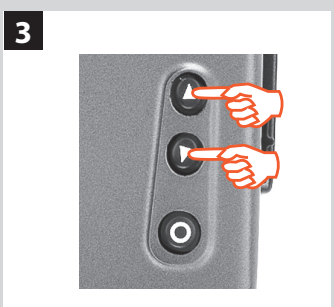
Note

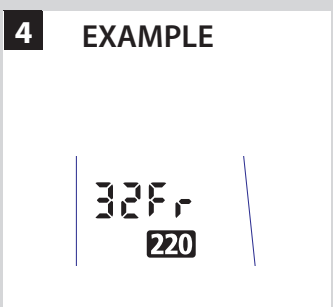
Films without a barcode must have their speed set manually. A manual setting must also be made if you want to override the speed setting of a barcoded film.

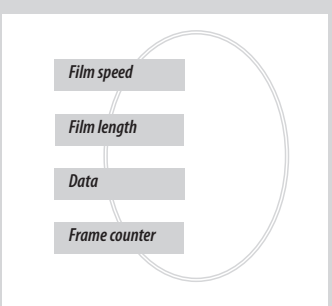
Note

Ensure you press on the centre of the button, not on the lever.









Note

If you use both standard and barcoded films (or overridden barcoded films), check that you have changed the settings accordingly.

Magazine settings

Press the function selector (⊙ button) repeatedly to successively access:

A. Film speed (ISO / Bar Code)

B. Film length (120/220/ Number of frames)

C. Data (on/off)

D. Frame counter (count down / count up)

E. Low-battery warning symbol

Film speed setting / barcode

The film speed (ISO / ASA) can be set automatically or manually. Automatic setting uses a barcode (only some films have this feature, notably Fujifilm). This is the default setting.

To access Manual setting:

1) *Ensure the magazine settings lock is in the unlocked position.*
2) *Press the ⊙ button until a figure (or barcode symbol) appears together with ISO.*
3) *Press either the ▼ or the ▲ button to reach the required setting.*
4) *The new setting will be saved automatically after a time out of five seconds.*
5) *Return the LCD settings lock to the locked position.*

Film length/number of frames

Both 120 and 220 films can be used. 120 film will produce 8 (for use with 'half-length' 120 films only) or 16 frames and 220 film will produce 32 frames.

If the film has a barcode, then film length setting (and film speed setting) is automatic. The LCD will automatically show the barcode symbol and the appropriate film length. (Note that film speed can be overridden with barcoded films, but not film length).

If, however, the film has no barcode then proceed as follows:

To access film type setting:

1) *Ensure the magazine settings lock is in the unlocked position.*
2) *Press the ⊙ button until the 120 or 220 symbol appears.*
3) *Press either the ▼ or the ▲ button to change the desired setting.*
4) *The new setting will be saved automatically after time-out.*
5) *Return the magazine settings lock to the locked position.*

Data imprint setting

Data imprinting can be activated or deactivated through the magazine menu.

To access data setting:

1) *Ensure the magazine settings lock is in the unlocked position.*
2) *Press the ⊙ button until the* **Data** *symbol appears.*
3) *Press either the ▼ or the ▲ button to reach On or Off.*
4) *The new setting will be saved automatically after a time out of five seconds.*
5) *Return the magazine settings lock to the locked position.*

Manual film speed setting.

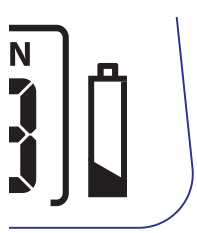
220 film length setting.

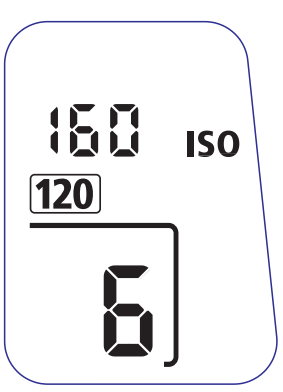
Data imprinting setting.

'Frames remaining' counter setting.

Note

Operation and changes made to the data imprinting function are accessed through the camera menu. Please see separate section in camera User Manual for full details.





Frame counter setting

The frame counter can be set to show either how many unexposed frames remain on a film or how many frames have already been exposed. The LCD shows your choice of setting by adding the word **Remain** as a reminder of the number of frames *remaining* or 'countdown'. Absence of this word implies the opposite, namely, 'count-up', so it denotes the number of the next frame to be used (for example, the figure 4 means three frames have already been exposed). This information is also automatically displayed on the grip LCD and viewfinder LCD though only as a figure above a symbol.

To access frame counter setting:

1) *Ensure the magazine settings lock is in the unlocked position.*
2) *Press the ⊙ button until **Remain** appears.*
3) *Press either the ▼ button or the ▲ button to reach the desired setting (toggle function).*
   - *'on' will show the number of frames remaining on the roll.*
   - *'oFF' will show the number of the next frame in the series.*
4) *The new setting will be saved automatically after a time out of five seconds.*
5) *Return the magazine settings lock to the locked position.*

Low-battery symbol

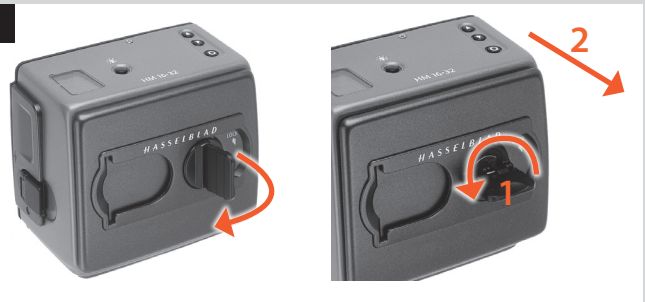
The low-battery symbol only appears on the magazine LCD when the battery needs changing.

Example

In the example shown here:

- *120 film length set manually*
- *the film speed (ISO160) has been set manually*
- *5 frames have already been exposed (therefore with regular 120 film, 11 frames remain)*
- *the battery is functional*

1



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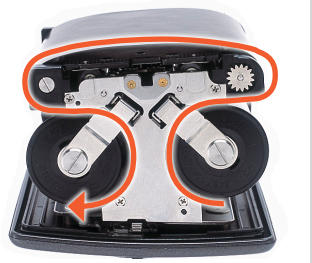
3



4

5

6

7

Film loading

The film magazine can be loaded either on or off the camera. Regularly check the interior of the magazine and remove dust, particles or any scraps of paper from previous rolls of film. Load and unload film magazines away from direct light sources.

1) *Fold out the film holder key and turn it counter-clockwise 90°. Withdraw the film holder completely.*
2) *Place an empty take-up spool in the upper spool holder by placing one end over the fixed stud in the holder and the other end underneath the sprung spool retaining arm. Rotate the spool a little if necessary until it clicks into position.*
3) *Completely remove the retaining paper band from a new roll of film and place it in the lower spool holder. See diagram for correct orientation. Ensure you do not place the film spool the wrong way around!*
4) *Pull 8–10 cm (3–4 in.) of paper backing from the film roll and insert the tongue of the backing paper into the slot in the take-up spool. Turn the spool one complete turn to ensure the tongue is firmly held in place by the overlying paper backing.*
5) *Re-insert the film holder into the main body of the film magazine ensuring the correct orientation. Press firmly inwards towards the magazine and pay particular attention to see that both sides are level with the magazine body before turning the film holder key clockwise 90° to lock the film holder in place and fold the key back into its stored position. You might find that increased pressure on the left hand side of the film holder will more easily ensure a positive and correct positioning in the magazine.*

   *If the camera is active or in standby mode the film will be wound automatically by the camera to position the first frame (this function can be changed in **Custom Options** so that the film is advanced only when the shutter release button is pressed the first time).*

Beeper

The beeper sounds immediately after the last-but-one frame has been exposed. This function can be turned off in **Custom Options**.

Film wind on and off 6, 7

Wind on: See 'Film wind-on' under **Custom Options** for a setting choice.

Wind off: When the last frame has been exposed, the film will automatically be wound off. However, to wind off a film sooner, press the film wind off button (fig. 6). Use a ballpoint pen or similar to activate it. You must also confirm the message on the grip LCD (fig. 7) before the film winds off.

Unloading a magazine

To remove a film, remove the film holder in the same manner as when loading a film. Grip the exposed roll of film firmly and remove. Ensure the paper backing is wound tightly and that it is sealed with the band properly (the band may need to be moistened to activate the adhesive depending on type). Store exposed films away from strong light sources and contact with sharp objects. Move the remaining empty spool to the take-up spool compartment.

H4x

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Lenses

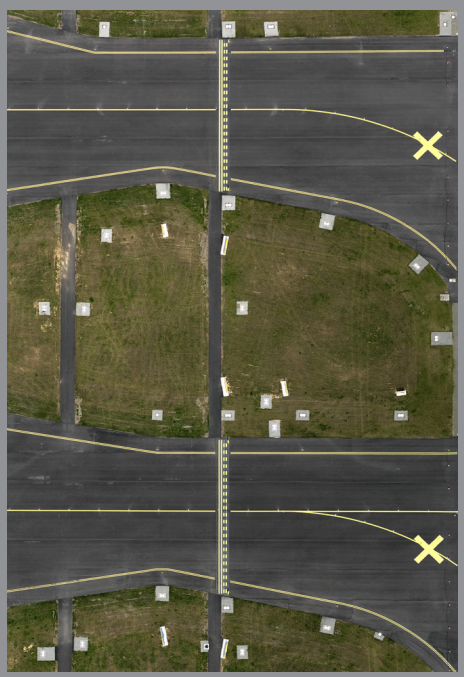

Photo: Stephan Zirwes / Hasselblad Masters

- **Rapid and accurate automatic focusing capability**
- **Central electronic shutter**
- **Instant manual focus override with natural friction**
- **Instant automatic-focus access in manual mode**
- **Non-rotation of filter or accessory when focusing**
- **Non-rotation of focus ring in automatic focusing mode**
- **Flash sync at shutter speeds from 256s to 1/800s**
- **Automatic detection of extension rings and converters**
- **C type lenses from the V system can be used in combination with CF Adapter (optional accessory)**

All HC lenses have been specially formulated for the H system to produce the extremely high performance expected from Hasselblad. In addition to exceptional sharpness, the design also incorporates a very pleasing bokeh. All lenses feature an electronically controlled central shutter designed to extremely fine tolerances for supreme accuracy. To ensure reliable and fast autofocus in low contrast and low light conditions, an AF focus assist light (on the grip) is automatically activated.

As a general rule, lens shades should always be fitted to achieve optimum performance. Protective filters (UV / Sky) should also be considered at least when working outdoors in harsh conditions.

For CF/CFH users only, DAC lens corrections can be applied in Phocus for outstanding results to markedly reduce chromatic aberration, distortion and vignetting.

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Parts and components 1

A. Lens shade index
B. Manual focus ring
C. Focusing distance scales
D. Depth-of-field scales
E. Lens index

Attaching a lens 2, 3

Remove the front protective cover on the camera body by depressing the lens release button and keeping it depressed while turning the cover counter-clockwise. Remove the rear lens cap by unscrewing it in a counter-clockwise direction. Align the index on the lens with the index on the camera body and rotate the lens clockwise (bayonet fitting) until it clicks into place.

Removing a lens

Depress the lens release button and keep it depressed while rotating the lens counter-clockwise until it stops and lift it out. Replace protective caps on the lens immediately and on the camera body if necessary.

If you try to rotate the lens before you press the lens release button, it might lock. In this case, rotate the lens clockwise a little first and then re-attempt removal with the correct procedure: button first, then lens.

Front lens cap 4

Front lens caps are released for removal and attachment by inserting a thumb and index finger into the recesses and pinching in the direction of the arrows.

Filters

Filters have a screw thread fitting (67 / 77 / 95 mm, according to lens) and are screwed clockwise into place. As there is no rotation of the front section of the lens when focus is changed, filters do not rotate either. This is particularly useful when using polarizing or graduated filters where the orientation is normally critical.

Lens shades 5, 6

All lenses are supplied with lens shades that additionally provide extra protection for transport and storage when mounted in reverse. Lens shades have a bayonet fitting and are turned clockwise into place after ensuring the index on the lens shade aligns with the index on the front of the lens. When mounted in reverse, they are attached by matching the indexes and turning clockwise.

Shutter and aperture control

Both the shutter and aperture are electronically controlled and are adjusted by the control wheels on the grip. There are no separate manual setting rings on the lenses or camera body.

The chosen settings are displayed both on the grip display and in the viewfinder display. See under ***Light Metering & Exposure Control / Exposure Method*** for a complete explanation.

Depth-of-field calculation 7

There are two distance scales (in feet and metres) visible through the focus distance window on the upper part of the lens barrel. There is also a central lens index mark and a depth-of-field scale. The focusing distance is read off the chosen scale from the central lens index.

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Lens focus setting too far beyond the distance of the subject framed by the central section in the viewfinder

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Focus setting too close for the distance of the subject framed by the central section in the viewfinder

12

Focus setting correct

Depth-of-field can be calculated as follows:

1. *Focus the lens as required.*
2. *Make an exposure reading (auto or manual) and note the aperture setting.*
3. *Find the markings on either side of the central index that correspond to the chosen aperture.*
4. *From these two markings, read off on the required lens distance scale the two corresponding distances.*
5. *The depth-of-field (at that particular aperture and focus setting) will be the area included between these two distances.*

In the example given here, the focusing distance is set at nearly 3 metres. At an aperture of f/22, the depth-of-field would therefore extend from just over 2 m to approximately 4.5 m. Note that depth of field is not an absolute. Perception of it depends on several factors and so it should be seen only as a rough guide.

Stop down / depth-of-field *8*

A visual depth-of-field preview can be made by depressing the **STOP DOWN** button while viewing the image on the viewfinder screen.

Infrared focus settings *9*

As infrared rays form an image at a different plane to that formed by visible light, the normal focus settings do not apply. Proceed as follows in manual focus mode:

1. *Focus the lens in the conventional manner until satisfied.*
2. *Note the distance setting against the central lens index.*
3. *Re-align this distance setting against the infrared mark (coloured red) instead of the central lens index.*

Alternatively if you have already calculated the required distance, you can make a manual distance setting by using the distance scales together with the infrared mark instead of the central lens index.

For specialists, please contact your Hasselblad dealer for information about digital backs adapted solely for infrared photography.

Focus assist *10, 11, 12*

As well as the conventional view on the focusing screen to ensure a sharp image, the H4X also features an LED focus assist capability appearing as two arrowheads to the right of the viewfinder display (except for lenses with a maximum aperture of f/6.7 or smaller). The arrowheads provide confirmation of a precision focus setting and are a useful aid when making a setting with eyesight alone.

Manual focus setting

When the left arrowhead alone appears it means the focus setting is too far beyond the chosen distance (the area framed within the central zone in the viewfinder) and when the right arrowhead alone appears it means the focus setting is too close. Focus is correct when both arrowheads appear together. If the focus cannot be established, then both arrowheads flash.

Automatic focus setting

Focus is correct when both arrowheads are visible together. Focus is incorrect if only one arrowhead is visible. If the focus cannot be established, then both arrowheads flash.

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Manual focus

There is both a **Manual** focus mode setting and a manual override capability. **Manual** focus is a specific setting that you actively make, whereas manual override is always available as a temporary override of an autofocus setting.

In **Manual** focus mode, focusing is carried out by rotating the focusing ring in the conventional manner. The focus setting remains until changed as with a conventional non-autofocus lens. This means that pressing the shutter release button will not activate a focus setting change as it does in autofocus. To change back to autofocus, you must make a new setting (by pressing the **AF** button and choosing **AF S** or **AF C**).

With manual override you can manually alter a focus setting that has been made in the autofocus mode, by rotating the lens barrel in the conventional manner and without having to change modes. As long as the shutter release button is kept at the half-press position, the new focus setting is maintained. By releasing the pressure on the shutter release button and pressing again, the autofocus function is immediately reactivated.

Manual focus mode

The **Manual** focus mode is set by the front control wheel on the grip in the following manner:

In camera active mode:

1) *Press the* **AF** *button on the grip.*
2) *Turn the front control wheel to: Manual*
3) *Press* **Save** *to store the setting.*

Natural friction is inherent in the design to purposely reproduce the secure feel of a completely manual lens.

Please note that when focusing manually, the infinity and closest distance marks on the lens scale can appear to be positioned beyond the central index. This is only an apparent effect and does not change the focusing range of the lens.

Autofocus override in Manual mode

See the following section for a description of how to use the advantages of a rapid autofocus check while remaining in **Manual** mode.

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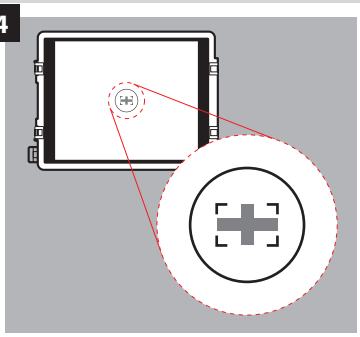

Autofocus

Autofocus mode can be either **Single Shot** or **Continuous** and is activated by pressing the shutter release to the half-press position. Its operative range is from EV 1–19 at ISO100. The point of focus is determined according to the vertical and horizontal areas (see illus 4.) within the central rectangular zone on the focusing screen. When light levels are too low or the contrast of the subject is too low, auxiliary illumination (situated on the top of the grip) is automatically activated if desired. The operative distance is approximately six metres from the camera. Alternatively, a suitable attached flash unit that has a similar facility (a Metz 54/70, for example) can also be used instead. This feature can be altered in settings (**Custom options #16/AF assist light**).

True Focus is also classified as an autofocus function and is normally activated by its own button on the grip. See later section.

Single Shot

At **Single Shot** setting (**AF S**), the shutter release will be blocked until the camera finds the optimum focus setting. This ensures that no captures can be made that are not finely focused. However, this delay will normally be only a fraction of a second in good lighting conditions with a clear focusing pattern.

Note though that in this mode the lens will focus at a distance and will remain focused at that distance while pressure remains on the shutter release button. In this way, you can focus on a nearby object for example, temporarily positioned within the focusing zone on the viewing screen and then without releasing pressure on the shutter release button, recompose knowing that the focus remains on the object chosen even though it is now outside the focusing zone. Releasing the pressure on the shutter release button and pressing again half way would now change the focus setting to the distance of the object within the focusing zone.

See ***Manual override in autofocus mode*** for a useful way of working with manual and autofocus settings in a combined manner.

Continuous

At **Continuous** setting (**AF C**), the shutter can be released rapidly before the lens is focused in order to capture a split-second shot (in **Single Shot**, a capture cannot be made until the camera has had time to focus). However, the camera will continue to focus if a moving subject is within the focusing zone or if you recompose, even though the shutter release button is half pressed.

One method to exploit this feature when photographing in a rapidly changing situation such as photojournalism, for example, is to keep the shutter release button pressed down. In this way the lens focuses constantly (according to the focusing zone) and by momentarily releasing the pressure on the shutter release and then immediately pressing again, you minimize the amount of time needed for the lens to check focus, thus ensuring a split-second shot at optimum focus.

True Focus

The **True Focus** setting (**AF T**) is generally used in specific circumstances to automatically correct for camera angle/focus setting discrepancies but it can also be combined with other autofocus settings.

To be able to exploit **True Focus** correctly, a few important points should be studied in order to obtain a full understanding of how and when to use it. Basically, there are four variables to pay attention to listed below: (a) proximity of camera to subject, (b) focal length of lens, (c) aperture setting and (d) movement of camera and/or subject after setting. The closer you remain to the ideal situation with regard to these variables, the more noticeable the effect of **True Focus** will be.

a. The closer you are to the subject, the worse the original problem becomes. Consequently, the need for **True Focus** solution becomes greater and its application thereby becomes more noticeable.

b. Short focal length (wide-angle) lenses naturally decrease camera to subject distances and therefore, following the point in (a), produce a greater need for **True Focus** adjustments.

c. Smaller apertures increase the depth of field and therefore would lessen the need for a **True Focus** solution. However, smaller apertures produce a different visual effect, so **True Focus** therefore allows the exploitation of the shallow depth of field (produced by larger apertures) without the fear of unwanted focus restrictions.

d. The mechanics of **True Focus** use, amongst other things, camera to subject distances to calculate the required amount of adjustment. It therefore follows that if the camera or the subject move after the initial setting has been made, the calculations will not be applicable anymore. So, to ensure the optimum correction, both the photographer and the subject should restrict movement as much as possible. Please note that with some lenses (particularly longer length lenses) just a few centimeters movement can essentially ruin the result.

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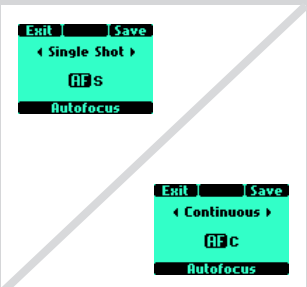

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True Focus can be used with longer lenses, smaller apertures etc but the further you come from situations similar to the 'ideal' as described above, the less the effect will be until it has no visible effect at all. Please remember that although **True Focus** can noticeably improve a demanding shoot it will only work effectively in the specific circumstances it was designed for.

See an explanation of **True Focus** and further details about use towards the end of this chapter.

Autofocus mode setting

Focus mode is set via the control wheels in the following manner:

In camera active mode:

1) *Press the* **AF** *button on the grip.*
2) *Turn the front control wheel to:* **Single Shot**, **Continuous**, **True Focus** *or* **Manual** *as required.*
3) *Press* **Save** *(***DRIVE** *button) to store the setting.*

Manual override in autofocus mode

Manual override is always possible in automatic focus mode without any need to make a new setting; just rotate the focusing ring in the conventional manner. As the lens barrel does not rotate in autofocus mode, you can hold the focusing ring for instant manual adjustments as you would with a conventional lens. However, to retain the new manual focus adjustments, you must maintain the pressure on the shutter release button. You can instantly return to the automatic focusing mode by releasing the pressure on the shutter release button first and then pressing the release button halfway again.

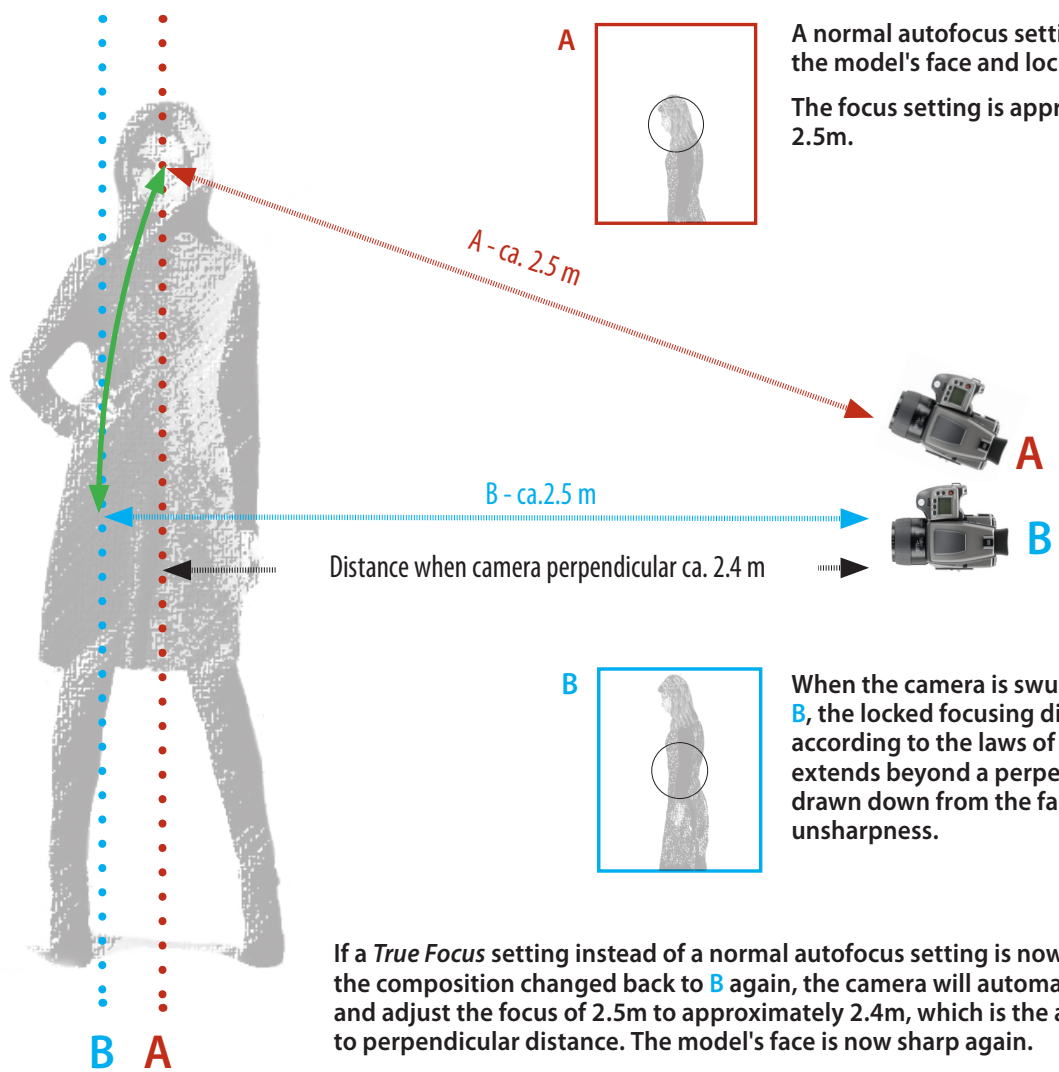
The instant manual override function produces a convenient way of working. You can take advantage of autofocus while retaining an instantly adjustable manual focus check if preferred for pin-point accuracy without making any changes in the settings.

True Focus and Absolute Position Lock

The obvious situation that would most benefit from using **True Focus** would be a fashion shoot with a fairly wide angle lens at a large aperture setting and where the central area of the image is clothing while retaining focus on the model's face. Ideally, a fairly controlled and static flow should be planned on (this means a change of pose by the model should take place only after captures and the photographer must resist crouching down, or leaning forwards or backwards too much before capture).

With the lens at its widest aperture setting, a normal autofocus setting is made on the model's face (A), and the camera focus locked. The composition is then changed to include more of the clothing (B), but the locked focus setting now extends beyond the model's face at (B) according to the laws of geometry. This will naturally result in an image where much of the subject closest to the camera and the model's face will be unsharp. Solutions involving manual focus/focus lock/resetting of multi-point sensors are distracting to workflow and prone to error. Making a **True Focus** setting at (A) will ensure that focus is automatically adjusted in accordance with the change of camera angle.

True Focus uses yaw rate technology and by way of the **Absolute Position Lock** (APL) processor, logs camera movement as the basis for an extremely rapid compensatory focus reset without any shutter lag. The H4X's firmware then further perfects the focus using the precise data retrieval system found on all HC/HCD lenses.



A normal autofocus setting is made on the model's face and locked.

The focus setting is approximately 2.5m.

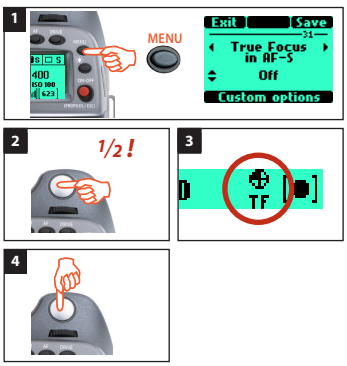
When the camera is swung back down, B, the locked focusing distance of 2.5m, according to the laws of geometry, extends beyond a perpendicular line drawn down from the face, creating unsharpness.

If a *True Focus* setting instead of a normal autofocus setting is now made at A and the composition changed back to B again, the camera will automatically calculate and adjust the focus of 2.5m to approximately 2.4m, which is the actual camera to perpendicular distance. The model's face is now sharp again.

True Focus

True Focus can be used in combination with other autofocus settings to achieve various functions.

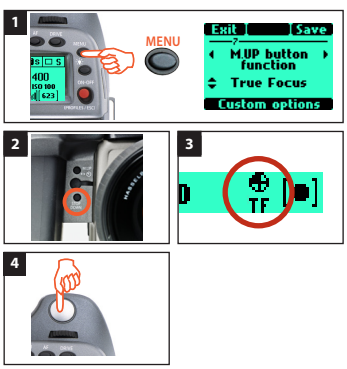
Activated by shutter release button – True Focus retained



In this mode the autofocus function is effectively converted into the True Focus function. That is, focus is set by half-pressing the shutter release button. Remember, though, that the True Focus function is retained until turned off in Custom Options.

1. *In **Custom Options, select # 32** (**True Focus** in **AF-S**) with the front control wheel. Select 'ON' with the rear front control wheel. Save.*
2. *Aim camera at important area in subject and half-press the shutter release button.*
3. *Wait for the **True Focus** icon to appear (in the viewfinder) and the audio confirmation signal.*
4. *Maintain the half-press and recompose the picture. Press fully to expose. The **True Focus** icon disappears from the viewfinder. **True Focus** function is retained.*

Temporarily activated by a selected 'User' button – Autofocus retained

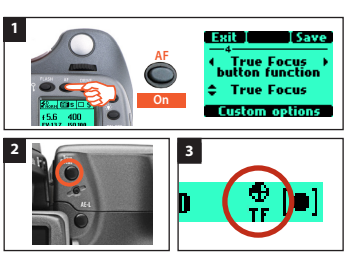


In this mode the True Focus function is activated by pressing an assigned button. This produces a 'one-shot' setting where the camera reverts to its original Autofocus setting after capture. Useful if you want to quickly switch back and forth between True Focus and normal Autofocus. Works with or without a Custom Options #32 setting.

1. *In Custom Options, select the desired button to reassign with the front control wheel (M.UP button in this example). Select '**True Focus**' with the rear control wheel. Save.*
2. *Aim camera at important area in subject and press the selected button (the grip display now indicates **AF-T** mode).*
3. *Wait for the **True Focus** icon to appear (in the viewfinder) and the audio confirmation signal.*
4. *Recompose the picture and press shutter release button (camera does not re-focus because it is temporarily in **AF-T** mode). The **True Focus** icon disappears from the viewfinder. Camera reverts to **AF-S**.*

   *Note that camera reverts to **AF-S** if the focusing ring on the lens is moved.*

Activated by True Focus button – Autofocus deactivated

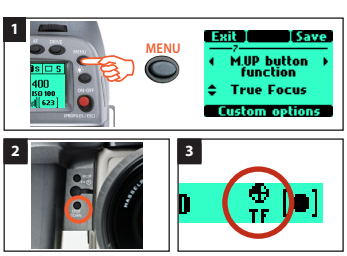


In this mode the True Focus function is activated by pressing the True Focus button. Normal autofocus is de-activated, therefore, pressing the shutter release button will not reset the focus. Useful when many shots are required with the same focus setting.

1. *Press AF button. Select '**True Focus**' with the front control wheel. Save.*
2. *Aim camera at important area in subject and press **True Focus** button.*
3. *Wait for the **True Focus** icon to appear (in the viewfinder) and the audio confirmation signal. Recompose the picture and press shutter release button.*

   *Note that the **True Focus** adjustment is applied to all following captures until **True Focus** button is pressed again (when a new adjustment is made).*

Activated by a selected 'User' button – Manual focus retained



In this mode the True Focus function is activated by pressing an assigned button. This produces a 'one-shot' setting where the camera reverts to its original Manual focus setting after capture. Pressing the shutter release button will not reset the focus. Useful when many shots are required with the same focus setting.

1. *In Custom Options, select the desired button to reassign with the front control wheel (M.UP button in this example). Select '**True Focus**' with the rear control wheel. Save.*
2. *Aim camera at important area in subject and press the selected button.*
3. *Ensure that the **True Focus** icon appears in the viewfinder.*

   *Recompose the picture and press shutter release button. The **True Focus** icon disappears from the viewfinder. Camera reverts to **AF-S**.*

   *Note that the True Focus adjustment is applied to all following captures until the **True Focus** button is pressed again (when a new adjustment is made).*

Note

Some lenses have extra characteristics that require further explanation. For example, the autofocus range on the HC 4/120 Macro lens can be limited by a specific setting on the camera allowing for near range, far range or full range. This only appears on the grip display together with that particular lens.

Further information can be found in the "H-system Lenses & H-system Lens Accessories" booklet that accompanies each lens. The booklet can also be downloaded from the Hasselblad website.

Also, see note here regarding HCD lenses!

Note

The autofocus function is not possible with certain combinations of lenses and accessories. However, a warning is displayed which disappears after confirmation.

Tip

For users who prefer manual focus control but would like the benefits of autofocus, one method is to set the AE-L button (or any user button) to AF (Single) drive.

The main subject can then be centered and the AE-L pressed, to ensure correct focus. The camera reverts immediately to manual focus control when the button is released.

Therefore, you can recompose the picture without having to maintain pressure on the release button in order to retain the newly automatically made focus setting (AF-T can also be used).

Tip

The True Focus function can also be combined with other autofocus modes for specific situations.

Tip

To expand your range of lenses, consider using a CF adapter to allow you to use most of the lenses from the Hasselblad V-system.

H4x

6

Light Metering & Exposure Control

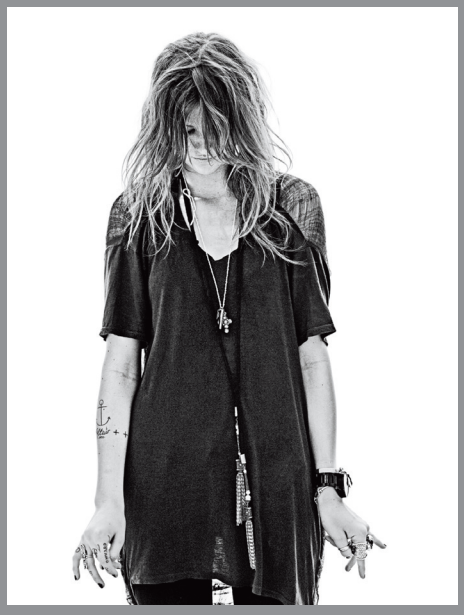


Photo: Lyle Owerko / Hasselblad Masters

- **Three metering methods**
- **Five exposure methods**
- **Extremely accurate light metering**

The light metering system of the viewfinder is capable of selective sensitivity producing three reflective metering methods: Average, CentreSpot and Spot. All methods are measured in increments of 1/12 EV. Information transfer is rapid and automatic ensuring consistently correct exposure settings even in difficult and changeable lighting situations.

Light measurement is made through the lens (TTL) and exposure is controlled manually or automatically by the control wheels and/or settings. The information is visible on both the grip display and the viewfinder display.

A great deal of control is available ranging from 100% manual through to sophisticated fully automatic by way of the various exposure methods: Manual, Aperture priority, Shutter priority, Program and Program variable.

Light metering and exposure control

Two primary factors have to be considered when making exposure control choice, namely, metering method and exposure method:

Metering method determines in which manner the light measurement is made and how much of the image is taken into account (**Centre Weighted**, **CentreSpot** and **Spot**).

Exposure method involves the parameters and deciding factors about how the light measurement is translated into aperture and shutter speeds. Here the choice is about the camera controls and their effect on the result or suitability for the subject. Included in this choice is the type of automation too (Manual for 100% user control, Aperture priority, Program, etc for automated control).

Some methods and modes are much more suited to various situations and applications than others, while some depend to a greater degree on personal preference and ways of working. A discussion of the points to consider in this context is beyond the scope of this manual.

Since the light measuring system is TTL, filter factors, lens extension/extension ring factors, etc, are automatically taken into account for average purposes. However, some combinations of methods and equipment can cause slight discrepancies for various reasons and therefore for critical work you should make alternative captures to suit personal preference.

Note

Exposures are displayed on the grip display to within 1, 1/2 and 1/3 EV tolerances (dependent on setting). This means that 'half-stops' are shown in a form that can differ from more traditional displays. For example, the position between f/ 8 and f/11 is displayed as f9.5 and likewise the position between 1/30s and 1/60s is displayed as 45. Therefore a display showing 'f 9.5 45' simply means 'f/9.5 at 1/45 second'. The appearance of an 's' after the shutter speed signifies whole seconds so, for example, '32s' on the display signifies an exposure time of 32 seconds, not 1/30.

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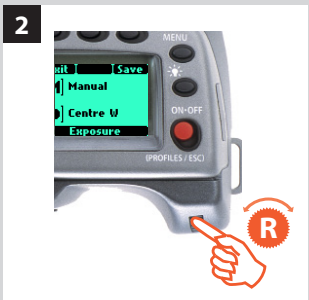

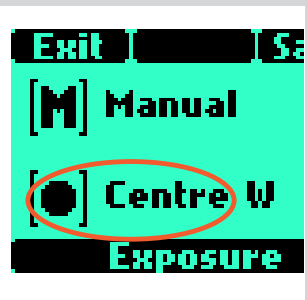

3

Metering method

There are three metering modes available. All three are reflective methods (measuring the light reflected off various selected parts of the subject according to method) and are through the lens (TTL). These have the following designations (with their respective display symbols):

[●] – *Centre Weighted*

[◉] – *CentreSpot*

[•] – *Spot*

See under 'Appendix' for details of sensitivity distribution.

Centre Weighted: Commonly used for 'average' light situations where there is no particular dominance of light or dark areas across the tonal range.

CentreSpot: Emphasizes the central section of the focusing screen. This provides a balanced assessment and is a typical choice where the main subject is in the centre of the image.

Spot: The sensitive area is marked by the central spot on the viewfinder screen. Any parts of the image outside of this area will not affect the exposure reading. This provides a very accurate measurement of specific tones. Typically used in the zone system and similar light measuring situations where maximum control is required. Also excellent for tonal comparison measurements. The spot mode can display 'zones' instead of EVs in the viewfinder display (see ***Custom Options #14***).

Selecting metering method

Proceed as follows with the camera in active mode:

1. *Press the* **EXP** *button on the viewfinder.*
2. *Turn the rear control wheel (in either direction 2a) to successively access the three choices:* **Centre Weighted, Centre Spot** *and* **Spot** *2b.*
3. *Press* **Save** *(***DRIVE** *button) to retain the setting.*

Exposure method

Exposure can be controlled either manually or by using one of four automatic modes. These have the following designations on the grip display:

M – Manual

A – Aperture (priority)

S – Shutter (priority)

P – Program

Pv – Program variable

In each mode you can see both the aperture and the shutter speed information on the grip display and on the viewfinder display.

In manual mode, aperture is set by the front control wheel and the shutter speed by the rear control wheel unless set otherwise in **Custom Options #27.**

In the automatic modes, the aperture and shutter speed settings are controlled by the camera, either partially or completely according to setting. Within this mode there are four choices.

(Please see the **Appendix** for **P** and **Pv mode** charts that describe the aperture and shutter speed setting combinations.

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Manual Exposure – M

Manual mode will provide total user control of the shutter and aperture settings.

To set the Manual mode, proceed as follows with the camera in active mode:

1) *Press the* **EXP** *button on the viewfinder.*
2) *Turn the front control wheel in either direction until you reach* **M** *(Manual).*
3) *Press* **Save** *(***DRIVE** *button) to retain the setting.*

In this mode the shutter speed and aperture settings are manually chosen by turning the front and rear control wheels.

The standard exposure setting is obtained when the pointer over the exposure scale is positioned above the central index (in the viewfinder display).

Any deviation from this standard setting is displayed by:

- ***the pointer appearing elsewhere than above the central index***

and

- ***by figures above the scale representing the amount of adjustment in EVs.***

A '+ 0.7' above the scale in the display, as in **illustration 4** for example, would indicate a '0.7 EV overexposure' setting. Conversely, a '-2' , for example, would indicate a '2EV underexposure' setting. Note that the appearance of a +/- symbol on the grip and viewfinder displays in manual mode means that a change has been made to the exposure compensation setting. See later section on **Exposure compensation**.

The actual aperture settings and shutter speeds are indicated to the right of the exposure scale in the conventional manner. (Note: 'full-stops', 'half-stops' and 'third-stops' are also displayed, according to setting (see 'increment setting). For example, a setting between f/8 and f/11 will appear as f/9,5 if 'half-stop' is chosen).

Automatic Exposure – A, S, P, Pv

Automatic exposure provides a choice of two ways of controlling shutter speed and aperture settings semi-automatically and two ways fully automatically:

Aperture priority: A - The aperture is manually chosen by you by turning the front control wheel, and the shutter speed is automatically chosen by the camera.

Shutter priority: S - The shutter speed is manually chosen by you by turning the front control wheel, and the aperture is automatically chosen by the camera.

Programmed: P - In this mode, an aperture / shutter combination is chosen by the camera according to the EV measured (metering method remains as your choice), though only within pre-set appropriate limitations to suit various requirements and applications.

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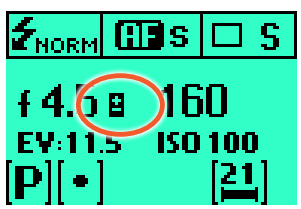

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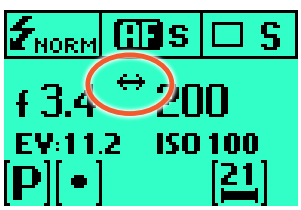

Tip

Aperture and shutter speed settings can both be changed even while the busy light on digital back is flashing.

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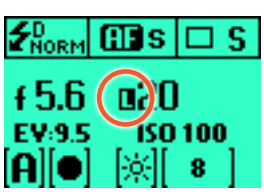

Tip

Access to the B and T shutter speed settings can be temporarily hidden. See **Custom Options #35**.

Programmed variable: Pv - This mode is very similar to Programmed, except with the additional parameters of lens focal length being automatically taken into account. For example, long shutter speeds will automatically be avoided with a long focal length lens.

To set one of the modes, proceed as follows with the camera in active mode:

1) *Press the* **EXP** *button on the viewfinder.*
2) *Turn the front control wheel (either direction) until you reach the required setting.*
3) *Press* **Save** *(***DRIVE** *button) to retain the setting.*

In **Automatic** mode the front control wheel selects alternative aperture /shutter combinations while maintaining the same EV and the rear control wheel alters the amount of exposure compensation. The compensation appears as a +/- symbol on the grip display and viewfinder display (illus. 4).

Variations (chosen by using the front control wheel) from the specific combination selected by the **P** or **Pv mode** are signified by a double arrow symbol appearing between the aperture and speed settings (illus. 5) on the grip display. These new variations provide the correct exposure but in different combinations.

AE- L button *1, 2, 3, 4, 5, 6*

This button has two main functions that can be incorporated in various working methods involving exposure locking. It also has an extra function for the flash measure capability (see ***AE-L*** section under ***Flash***). The **AE-L** button can:

a) lock an EV setting in manual and automatic modes.

b) be used as a Zone System placement button.

a) When the button is pressed (fig 1), the light metering facility is locked to the EV setting at that moment. An **L** (= locked) symbol appears between the shutter speed and the aperture indication (fig 2) on the grip display and viewfinder display to confirm the status. Press the **AE-L** button again to unlock (toggle function).

In the locked setting, the aperture and shutter speed become interlocked. In this way, a new aperture/shutter combination that still represents the same EV, can be rapidly chosen. For example, if you set the shutter at 1/125s and the aperture at f/8 and lock them together, you can access new EV-equivalent combinations of, for example, 1/30s a f/16 or 1/500s at f/4 just by moving the front control wheel.

In practice this means you could, for example, in auto mode, position the metering area (spot setting) over an area in the subject that you determine to be equivalent to a mid-grey and lock it with the **AE-L** button. You can then recompose the picture with the metering zone positioned over an area much brighter or darker while still retaining the original exposure setting and choose a new combination of aperture and shutter speed settings.

3

New metered area is 1.8 EV lower than the area metered when the AE-L button was pressed.

4

AE-L button pressed to call the metered area 'Zone 5'.

5

Metered area reads 'Zone 8'.

6

Metered area above 'Zone 10'.

b) The **AE-L** button also allows the spot metering function to make zone placements. When the **AE-L** button is pressed, the metered area is saved as a mid-grey (Zone 5). When the spot area is then placed over another part of the scene, the new area is then compared to the saved area and the difference can be read off the scale seen in the viewfinder. For example, in a landscape situation you could meter the foreground, lock the reading with the **AE-L** button (thereby locking that area to be reproduced as the equivalent to a mid-grey 18%), point the camera at some rocks to see by how much darker they are compared to the foreground by the EV difference read off the scale (illus 3).

If you have chosen **Spot** together with **Zone** display (see ***Custom options #14*** for settings) as well as one of the automatic modes **A**, **S**, **P** or **Pv**, point the spot marking at an area that you decide should be a Zone 5 and click the **AE-L** button (illus 4). The meter will now display different parts of the subject as zone values (illus 5) in the viewfinder display, instead of EV deviations, as you move the spot marking over the subject. (Included are Lo and Hi (illus 6) to signify areas beyond the range of the sensor).

Alternatively you can choose to re-classify an area as another zone and then check the rest of the subject to see how other areas fall on the zone scale. Do this by following the above procedure and then turning the rear control wheel until you see the new desired zone value in the viewfinder display. You will also see the new exposure that will now produce that new zone. For example, you might have measured a rock at zone 5 but wish to make it darker. By moving the rear control wheel you could re-classify it as zone 4. You will then be able to see, for example, whether white clouds are now falling within the exposure range by their new zone classification.

Alternatively, you can also pre-set the initial zone reading in order to save time and effort where there is no freely available 'zone 5' subject for light measuring. For example, you might be on a sandy beach where you know that sand is normally classified as zone 6. You can pre-programme the zone placement by holding down the **AE-L** button while choosing the new zone value and turning the front control wheel until zone 6 appears. All new placements will then be zone 6.

Custom Options #3, #17 and #23 used to deactivate and alter the settings for the rear control wheel/Quick Adjust function.

Exposure compensation/Quick Adjust

The exposure compensation function, for both manual and automatic modes can be set from -5 to +5 EV, in 1/3, 1 or 1/2 EV increments (***Custom Option #3***) and is visible above the scale in the viewfinder and as a ± symbol on the grip display.

The quickest way to make an adjustment in auto-exposure mode is use the rear control wheel.

To make a temporary compensation setting in an auto-exposure mode using the Quick Adjust function:

a) Select chosen auto exposure mode.

b) Turn the rear control wheel to select the chosen amount of compensation.

The amount is displayed in the viewfinder as both an EV figure complete with a 'minus' or 'plus' prefix and as a marker above a 'minus' to 'plus' scale.

Default settings provide 1/3 EV compensation and an immediate clearing of the setting after capture.

However, in ***Custom Options #3*** you can select 1/3, 1 or 1/2 EV increment changes, in ***Custom Options #23*** you can choose to retain the setting after capture and in ***Custom Options #17*** you can deactivate the function.

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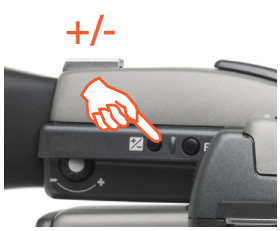

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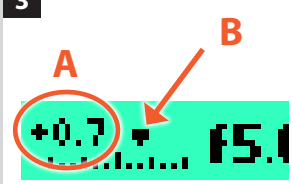

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To make a fixed exposure compensation setting, proceed as follows with the camera in active mode:

1) Press the +/- button on the viewfinder.

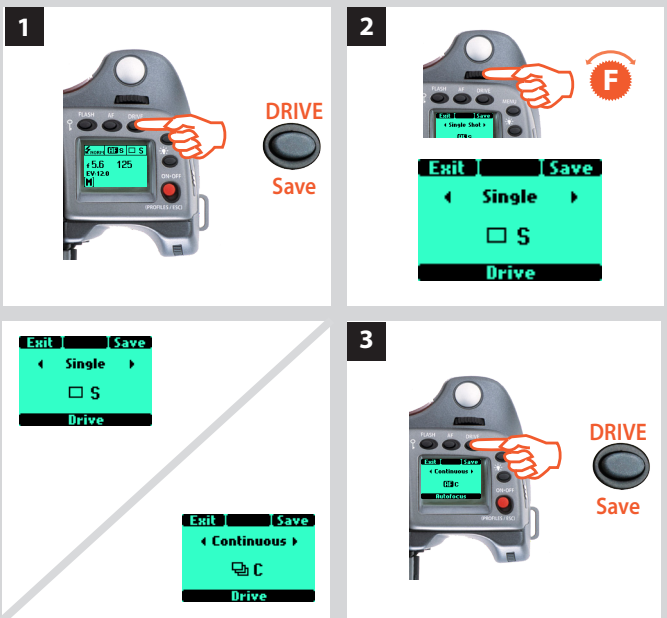
2) Turn either the front or rear control wheels to increase or decrease the amount of compensation in 1/3 EV steps.

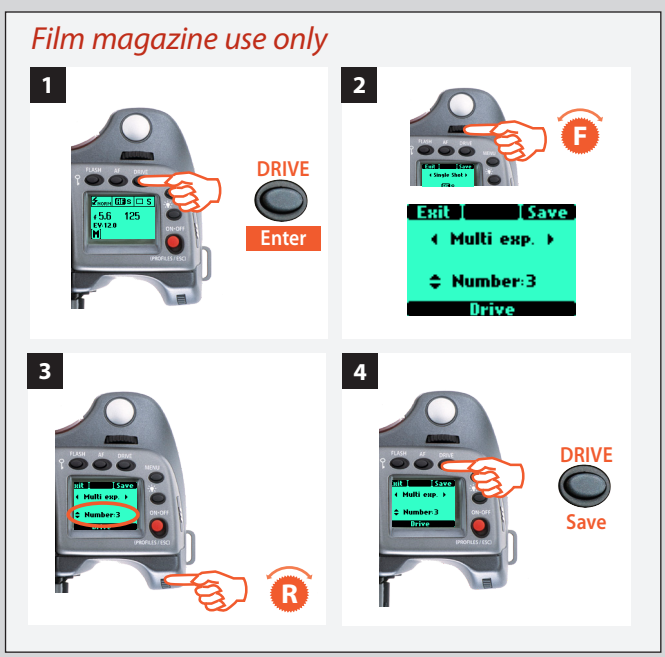
3) The amount is displayed in the viewfinder as both an EV figure complete with a 'minus' or 'plus' prefix (A in illustration), and as a marker above a 'minus' to 'plus' scale (B in illustration).

4) Press **Clr** *(***AF** *button) to reset any compensation back to zero.*

5) Press **Save** *(***DRIVE** *button) to retain the setting.*

6) A '±' symbol is then displayed between the aperture and shutter speed setting as confirmation of the setting.





Drive

There are two drive modes, **Single** *and* **Continuous**, *accessed by pressing the* **DRIVE** *button on the grip.*

Single

In **Single** mode, an exposure is made when the shutter release button is pressed and the camera is made ready for the next exposure. To make the next exposure however, you must first release the shutter release button and then press again.

In camera active mode:

1) *Press the* **DRIVE** *button on the grip.*
2) *Turn the front control wheel to:* **Single**
3) *Press* **Save** *to store the setting.*

Continuous

In Continuous mode, the camera automatically makes exposures and makes ready for the next exposure in a continuous manner as long as you maintain pressure on the shutter release.

In camera active mode:

1) *Press the* **DRIVE** *button on the grip.*
2) *Turn the front control wheel to:* **Continuous**
3) *Press* **Save** *to store the setting.*

Multi exposure (Applies to film magazine use only)

In Multi exposure mode, the camera does not advance the film after the first exposure, only at the end of the pre-determined number of exposures. The frame options are: 2, 3, 4, 5 and 'No limit'.

In camera active mode:

1) *Press the* **DRIVE** *button on the grip.*
2) *Turn the front control wheel to:* **Multi exp**.
3) *Turn the rear control wheel to select the number of frames required.*
4) *Press* **Save** *(***DRIVE** *button) to store the setting.*
5) *The LCD will display firstly that no frames have been exposed in the multi-sequence (For example, in the case of a three exposure setting the display will be Exp:0/3).*
6) *Press the shutter release button to make the first exposure.*
7) *The LCD will display how many frames have been exposed in the sequence (In the case of a three exposure setting the display will now be Exp:1/3. After the next exposure, the LCD would then display 2/3 etc)*
8) *You can change your mind at any time to exit the sequence by pressing the* **DRIVE** *button to advance the film to the next frame. The camera is then prepared for another new multi exposure sequence according to the initial setting.*

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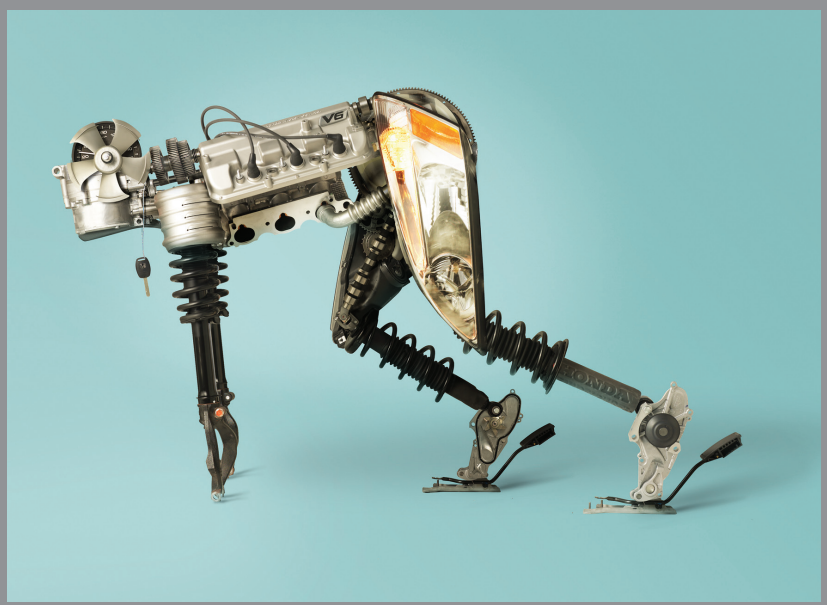
7

Profiles

Profiles not only allow for rapid setup in changing working environments but also ensure an element of security.

Photo: Mark Holthusen / Hasselblad Masters



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Profiles

The profiles feature allows rapid access to pre-determined combinations of settings that increase the speed and security of workflow. One example might be in a social situation where there might be a need for formal outdoor portraiture followed by informal indoor handheld flash-assisted wide-angle shots, both situations requiring very different settings in a stressful environment. By predetermining the relevant settings required beforehand for each situation, they can be saved collectively as a profile. By calling up the profile, you can then be assured that all the settings are correct at the press of one button.

For example, you might choose – autofocus single, bracketing, programmed exposure, etc – for outdoors. Once set, you would click on the red **PROFILES** button, select a profile name and press **SAVE**. A new name can be entered for the new profile - 'Outdoors', for instance - and saved again. New settings are made for the indoor shots changing to flash, Pv setting, etc and the procedure repeated. By simply accessing 'Outdoors' or 'Indoors' in the profile list, all the relevant settings will be instantly and correctly implemented to match the situation.

There are eight profiles: **Default, Full auto, Studio, Fill flash**. and four **Spare** reserved for customization. All except **Default** can be changed and renamed.

The pre-set profiles feature the following:

Default: normal flash sync, autofocus (single), single drive, auto exposure (aperture priority), centre weighted metering, user button - None.

Full auto: normal flash sync, autofocus (single), single drive, programmed exposure, centre weighted metering, user button - None.

Studio: normal flash sync, manual focus, single drive, manual exposure, spot metering, user button - AF.

Fill flash: normal flash sync (adjusted output -1.7EV), autofocus (single), single drive, auto exposure, centre weighted metering.

Spare: customized profiles.

The default setting is highlighted on the display for easy and rapid access. Access to profiles lower on the list is via a scroll bar visible on the right of the display. Rotate the rear control wheel to bring them into view.

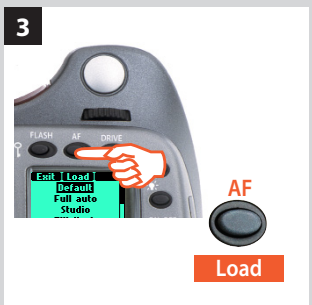
All user profiles can be restored to default values again simply by removing the battery and holding down the **MENU** and **DRIVE** buttons together and while keeping them depressed, replace the battery. There will be an audible signal that denotes the restoration.

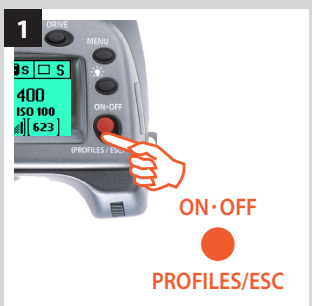
Note

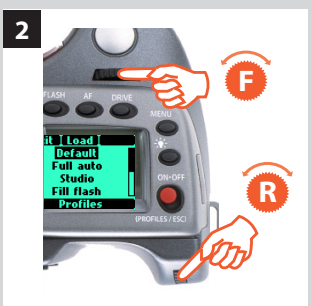
All settings are stored when a profile is created. This includes the ISO, white balance, color temperature and color tint settings that were current at the time the profile was created. These profile settings will override the settings in use at the time the profile button was pressed. In other words, remember to check for unintentional ISO, white balance or color temperature changes when using profiles. (Color tint is not a user setting but is stored after a manual white balance has been made).

Making a profile

1) *Activate the camera and go through the various settings (for example, autofocus, aperture priority, fill flash exposure compensation, etc.) you require for the particular purpose and save them as you go.*
2) *When all the required settings have been made, click (not press!) the* **PROFILES** *button (***ON.OFF** *button) on the grip and the profile screen will appear.*







3) *Use the scroll bar to go through the list of profiles. Choose a* **Spare** *profile or a named profile (except* **Default***). You can either save the new profile under the original name or you can change it*

4) *Press* **Save (DRIVE b***utton). The Profile name screen is then displayed where you can rename the profile to what suits you (see under* ***Image Info 4.2*** *for procedure details).*

To use a profile from the main screen, press the **PROFILES** button to reach the profiles screen again. Scroll down the list to the profile you want and then press the **Load** (**AF**) button. All the saved settings will then be automatically implemented.

Note

If you decided to change the settings but nevertheless keep the Profile name on the list, the new set of parameters will be retained under that name. That is to say, the settings will not be the same as listed here, despite the name. It might be safer practice to always change the profile name to avoid later confusion.

Using profiles

1) *From the main screen, click* **PROFILES** *(***ON.OFF** *button) on the grip and the profile screen will appear.*
2) *Use the scroll bar to go through the list and highlight the desired profile.*
3) *Press* **Load** *(***AF** *button). The camera is now set according to all the parameters stored according to the name.*

Changing a profile name

You can change a profile name (except 'Default') at any time.

Proceed as follows:

1) *From the main screen, click* **PROFILES** *(***ON.OFF** *button) on the grip and the profile screen will appear.*
2) *Scroll through the list (front or rear control wheels) and highlight the desired profile.*
3) *Press* **Load** *(***AF** *button).*
4) *Click* **PROFILES** *(***ON.OFF** *button) again.*
5) *Press* **Save (DRIVE b***utton) The Profile name screen is then displayed where you can rename the profile to what suits you (see under* **Image Info 4.2***).*

Tip

To quickly reset all profiles back to the original factory settings:

1. Remove battery.
2. Wait 5–10 seconds.
3. Replace the battery while keeping both the Menu and ISO/WB buttons pressed.

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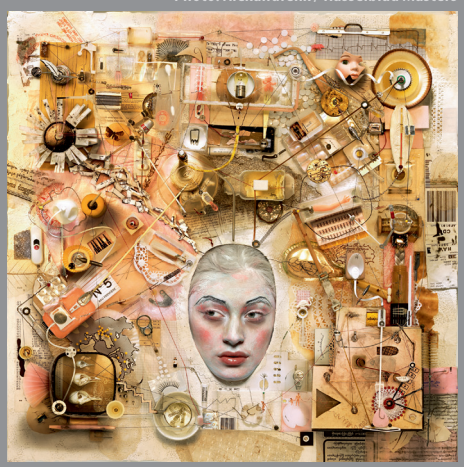
8

Custom settings
– controls and displays

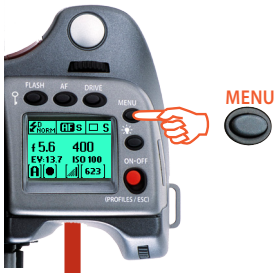
This section describes the features that can be exploited to obtain the optimum in customized workflow.

The custom options are designed to work for you in the background, ensuring security and also helping to bring down the barriers between you and capturing the image. Each one can be changed to suit your preferences so that the whole camera becomes a reflection of the way you like to work.

Photo: Alexandfelix / Hasselblad Masters



General overview of camera menu



Exit Enter
1
Self Timer
Menu

Exit Enter
2
Bracketing
Menu

Exit Enter
3
Interval
Menu

Exit Enter
4
Settings
Menu

Exit Enter
5
Digital
Menu

Self timer options

Bracketing options

Interval options

Settings options

Text setting

System status

Digital

This section is primarily only accessible with Hasselblad CF/CFH use.

3rd party digital backs, may or may not initiate the **Digital** screen and its settings. Please refer to the appropriate user manuals for information.

Custom Options

Menu charts – general

Throughout this manual you will find charts to explain the steps and procedures required to alter the various settings. These charts are laid out to graphically illustrate in a simple manner how to navigate through the menus. While they include all the information that would be presented on the display relevant to that section, they cannot illustrate all the possible combinations of the various symbols seen on a screen at one time as that would be impractical and too confusing. If you are familiar with mobile/cell phone menus, for example, then the design of the layout and working practice will not be unfamiliar.

You should find that, in practice, working your way through a menu on the camera is a good deal simpler and more obvious than the written explanation implies!

In the descriptions, various terms are used regarding menu navigation. Menus have 'trees', for example, which describes their imaginary graphical layout where you could trace a navigational path along its 'branches'. Each new section, or stopping off point on the branches, seen on the display is called a 'screen'. Therefore a screen is the graphical display of where you are on the menu and represents the current state of settings.

The H4X features the advantage of multiple customization of settings. This means that your personal choice of settings, and thereby appearance of various combinations of symbols on the display at any time, will not necessarily be the same as many of the screens illustrated in this manual.

To simplify the descriptions, reference is often made to a 'main' or standard screen. Apart from default settings, there is no actual standard setting in the normal sense and therefore you create your own 'standard', which of course can be changed at any time.

The 'main' screen is therefore the one you have currently created and is the one visible on the display when photographing (except where a particular mode is in actual operation, such as self-timer, for example).

Symbols used in the illustrations

Use front control wheel
(direction depends on user setting)

Use rear control wheel
(direction depends on user setting)

Press button or turn wheel

MENU button on the grip

Choose ENTER
(by pressing DRIVE button on grip)

Choose ON
(by pressing AF button on grip)

Choose Save

(by pressing the DRIVE button on grip) The new setting will be saved and chosen action can be carried out. Setting will be retained until changed.

Functions in loop on menu

A loop means that the available functions on that particular branch of the menu can be successively accessed in either direction of the control wheels without a break in flow. That is, you could turn the wheel clockwise or anti-clockwise to arrive at the desired function.

Main direction of path through menu

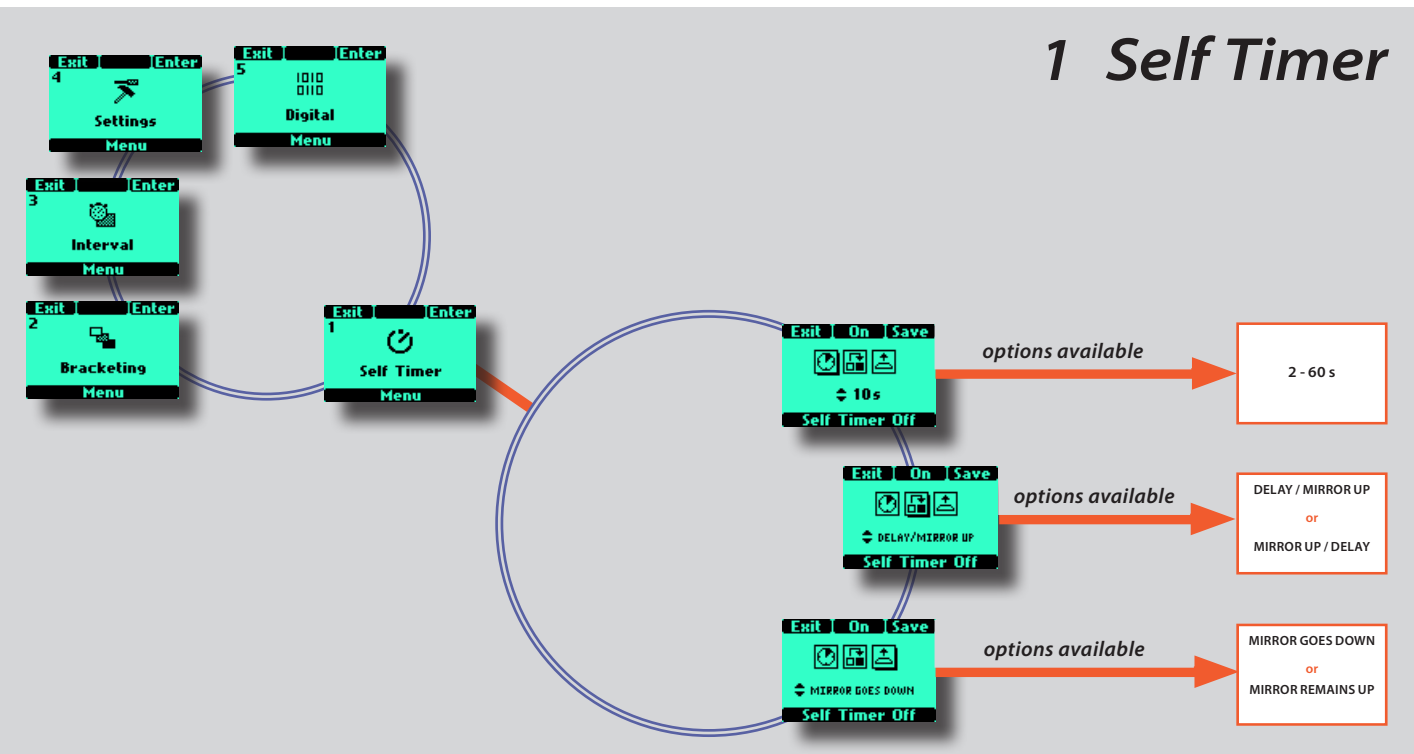
The main path traces step-by-step the path that has to be taken through the various branches of the menu tree as they appear on the display to reach the relevant functions.

There are a number of more advanced features that while not necessarily used every day still remain immediately accessible through the menu system. They provide the integral finesses that make the H4X a powerful and sophisticated tool to satisfy a variety of professional demands.

There are five main functions:

Self timer, Bracketing, Interval timer, Settings and Drive.

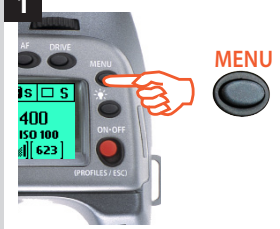
An important point to remember is that certain options are only available when the relevant screen has been accessed. For example, in Self Timer the choice of 'delay/mirror up' or 'mirror up/ delay' is only available (by turning the rear control wheel - lower row on display) when the relevant function has been chosen (by turning the front control wheel - upper row on display)



1 Self timer

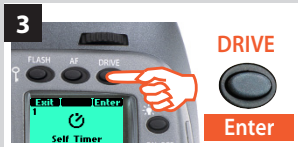
The self timer allows a delay in the activation of the shutter and a change in sequence of the mirror movement. Normally the mirror is raised before the shutter is tripped creating a pause between the two actions to minimize camera vibration. However, during this pause there will be no image in the viewfinder and no light metering available for any eventual exposure change. Therefore the Self timer function can be set to a sequence where the delay is followed by the mirror being raised instead. Normally the mirror will instantly return after a capture but you can also choose a setting where the mirror remains raised. The Self Timer can be set to provide virtually vibration-free shutter release. It can be used instead of a remote release cable/cord/device when split-second timing is not critical. The camera's exposure settings (Manual or Auto) will be according to the light metering requirements just prior to the mirror being raised so choose the method accordingly with long delays in very changeable lighting conditions.

1

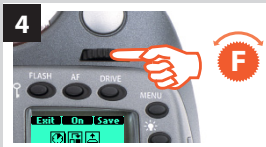


2

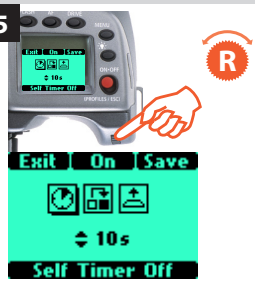
3



4



5



'Delay' highlighted with drop shadow. 10 seconds chosen.

6

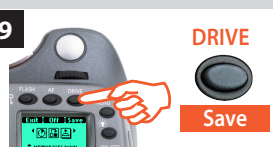
Mirror sequence highlighted. 'Delay first, then mirror raised' chosen as option.

7

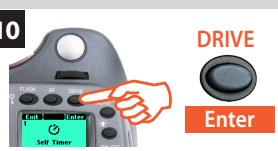
Mirror down /up highlighted. 'Mirror down after capture' chosen as option.

8

9

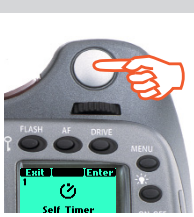


10



11

12



Self timer setting

The Self timer function is set in the following manner:

1) *Press the* **Menu** *button on the grip.*
2) *Turn the front control wheel until* **Self Timer** *appears.*
3) *Press* **Enter** *(***Drive b***utton) on the grip.*
4) *Turn the front control wheel to access the options, that are:*

Delay

Mirror sequence

Mirror Up / Mirror Goes Down

(A drop shadow will be displayed beneath the selected symbol, for example)

5) *When* **Delay** *is highlighted - - turn the rear control wheel to choose a delay range from 2 - 60s in 1s intervals.*
6) *Turn the front control wheel again to choose* **Delay / Mirror Up**, **Mirror Up/ Delay** *sequence - . When highlighted turn the rear control wheel to choose.*

Delay / Mirror Up *sequence =*

Delay for set amount of time – mirror raised – capture made.

Mirror Up/ Delay *sequence =*

Mirror raised – delay for set amount of time – capture made.

7) *Turn the front control wheel again for*

Mirror goes down / Mirror remains up *- - choice. Turn the rear control wheel to choose.*

Mirror goes down =

Mirror returns to its normal position and the camera is made ready for the next capture.

Mirror raised =

Mirror remains in raised position. No image is visible in the viewfinder until M UP button pressed.

8) *Press* **On** *(***AF** *button). Note that this now reads* **Off** *and the line of text at the bottom of the screen reads '***Self timer on'**.
9) *Press* **SAVE** *(***DRIVE** *button) to save the setting.*
10) *Press* **ENTER** *(***DRIVE** *button) again from the Self Timer screen to activate the function.*
11) *Click* **On** *(***AF** *button).*
12) *Half-press the shutter release button to standby mode for this function (press the shutter release button again (full press) for activation) or full-press the shutter release for immediate activation.*

Tip

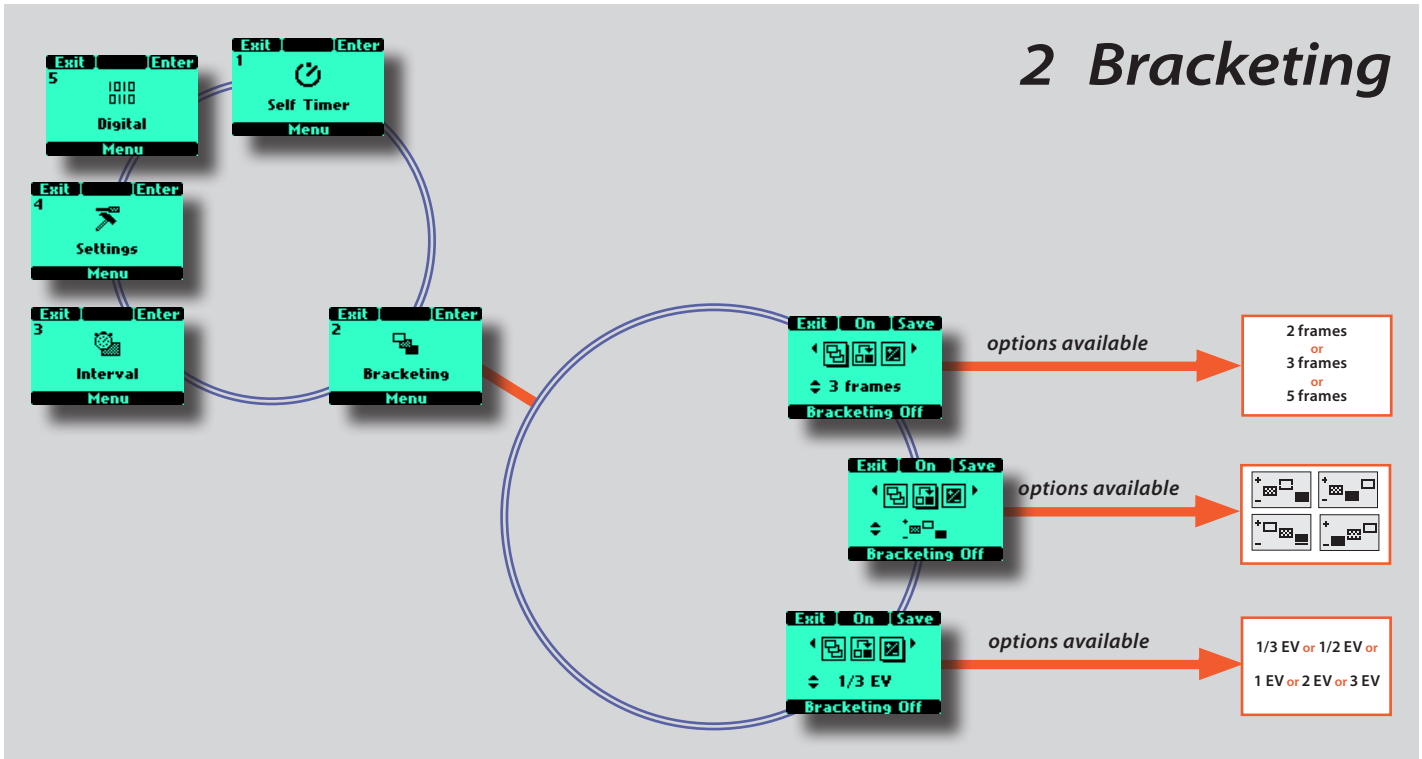
Check the lower text-row on the screen for ON or OFF status.

Note

You can halt the sequence by clicking the ON / OFF (ESC) button.

Tip

Press the Mirror Up button twice within 0.5s to access the self timer mode directly.



Tip

A bracketing sequence can be stopped mid-sequence by pressing the ESC (ON.OFF) button.

Tip

Check the lower text-row on the screen for ON or OFF status.

Note

See note at the beginning of this section regarding the difference between Single and Continuous drive settings. In both cases, the bracketing function is automatically reset for a new sequence.

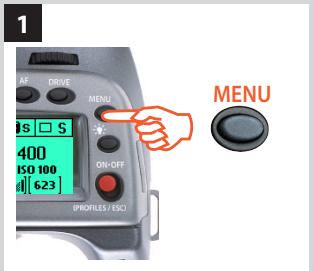
2 Bracketing

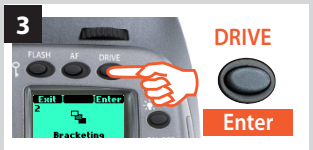
The bracketing function provides an automatic series of captures; one at the standard exposure setting (Manual or Auto) and the others with pre-determined deviations in EV from the standard exposure. This is particularly useful for images containing a very wide tonal range, for example.

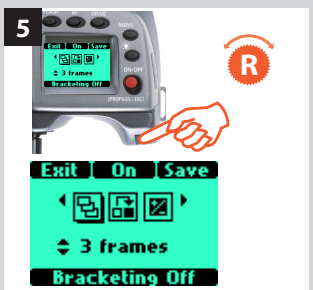
Firstly you make an assessment concerning the number of extra frames required, the order in which they should be taken, and by how much the EV deviation there should be and the setting made accordingly. The first metered exposure (Manual or Auto) is the EV that determines the calculations for the bracketing sequence.

Note the difference in operation between **Single** and **Continuous** drive settings:

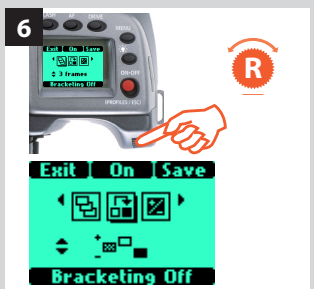
- In **Single** you must press the shutter release button separately for every separate capture until the sequence is finished.
- In **Continuous** you can either maintain the pressure on the button to take all frames without stopping or you can release the pressure on the button and press again to continue to the end of the sequence without losing any frames within the set sequence.



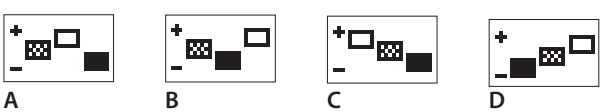


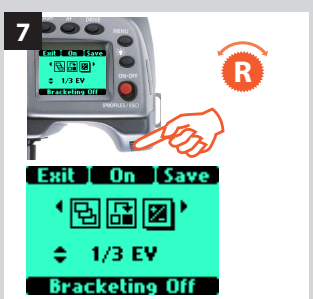


Number of captures highlighted.
3 captures chosen as option.

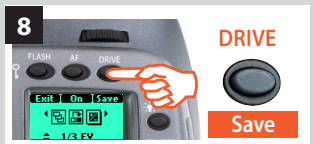


Sequence highlighted.
'Standard, over, under' chosen as option.

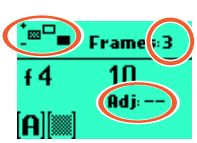




Step highlighted.
1/3 EV variation chosen as option.

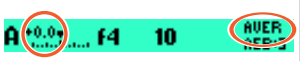


EXAMPLE



Screen after Bracketing setting activated indicating 3 frames remaining in a Standard, Over, Under, sequence with no adjustment to the next frame.

EXAMPLE



Viewfinder display indicating no adjustment to next frame and three frames left in the sequence.

Bracketing setting

The Bracketing function is set in the following manner:

1) *Press the* **Menu** *button.*
2) *Turn the front control wheel until* **Bracketing** *appears*
3) *Press* **Enter** *(***Drive***) button on the grip*
4) *Turn the front control wheel to access the options, that are:*

Number of Captures *(the number of captures required in the sequence)*

Sequence *(the sequential order of the over- or underexposures)*

Step *(the amount of EV variation from the standard exposure setting)*

(A drop shadow will be displayed beneath the selected symbol, for example)

5) *In turn the rear wheel to choose the number of frames required:* ***2, 3, 5, 7 or 9.***

6) *In turn the rear wheel to choose one of four sequences:*

A: ***Standard, Over, Under***
B: ***Standard, Under, Over***
C: ***Over, Standard, Under***
D: ***Under, Standard, Over***

7) *In turn the rear wheel to choose the amount of EV variation required:* ***3, 2, 1, 1/2, 1/3 EV.***

8) *Press* **Save** *(***Drive** *button) to save the setting.*

9) *Press* **Enter** *(***Drive** *button) again from the Bracketing screen to activate the function. Press* **On** *(***AF** *button). Note that this now reads* **Off** *and the line of text at the bottom of the screen reads* **'Bracketing on'***.*

Half-press the shutter release button to standby mode for this function (press the shutter release button again (full press) for activation) or full-press the shutter release for immediate activation.

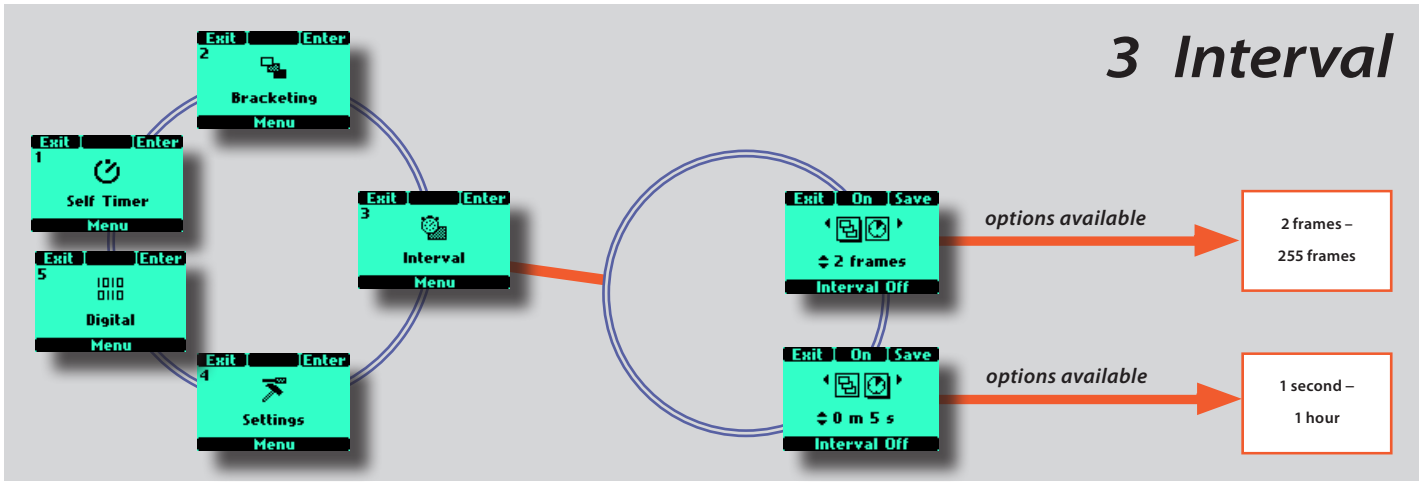
To escape from this mode press **Menu***, then* **Enter** *(***Drive** *button on the Bracketing screen, then* **Off** *(AF button).*

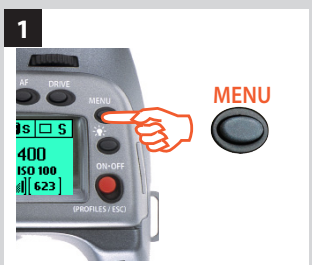
Note

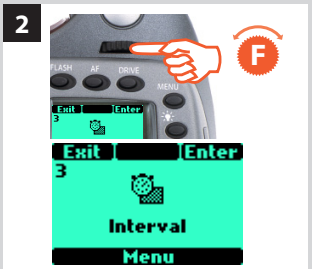
As an example, a 5 frame sequence with an EV 1 variation setting at 'Standard, Over, Under' would produce: Standard (O EV variation), +1EV, -1EV, +2EV, -2EV.

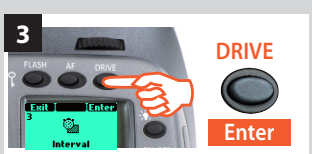
Note

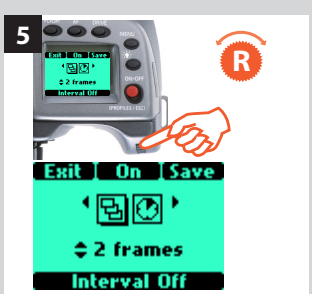
The default setting is a shutter speed change in a bracketing sequence. However, if the camera is set in Manual mode, you can choose an aperture change instead (Custom Options - Bracket param. in Manual #26)



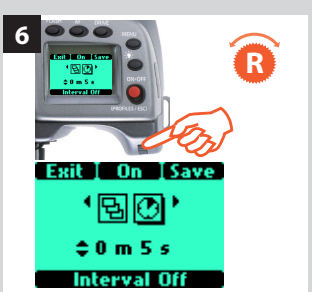




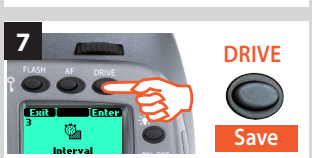




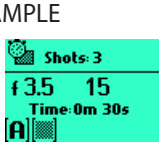
Number of captures highlighted. 2 frames variation chosen as option.



Interval duration highlighted. 5 seconds variation chosen as option.



EXAMPLE



Screen after Interval setting activated indicating 3 shots remaining at 30 second intervals.

Tip

Check the lower text-row on the screen for ON or OFF status.

3 Interval

By using the interval setting, you can allow the camera to take a series of captures automatically over a set period. This is often required for time and motion studies, security surveillance, nature study, etc. The exposure and focus settings (Manual or Auto) will be according to the camera settings at the time of capture.

Interval setting

1) *Press the* **MENU** *button on the grip.*
2) *Turn the front control wheel until* **Interval** *appears.*
3) *Press the* **ISO/WB** *(***Enter***) button on the grip.*
4) *Turn the front control wheel to access the options, that are:*

Number of captures *(the number of captures required)*

Interval duration *(the time interval between the captures)*

(The chosen symbol is indicated by a drop shadow)

5) *In Number of captures, turn the rear wheel to choose the number of captures required:* ***2 – no limit***
6) *In Interval duration, turn the rear wheel to choose:* ***1 second – 1 hour***
7) *Press* **Save** *(***Drive** *button) to save the setting.*
8) *Press* **Enter** *(***Drive** *button) again from the Interval screen to activate the function. Press* **On** *(***AF** *button). Note that this now reads* **Off** *and the line of text at the bottom of the screen reads '***Interval on***'.*

Half-press the shutter release button to standby mode for this function (press the shutter release button again (full press) for activation) or full-press the shutter release for immediate activation.

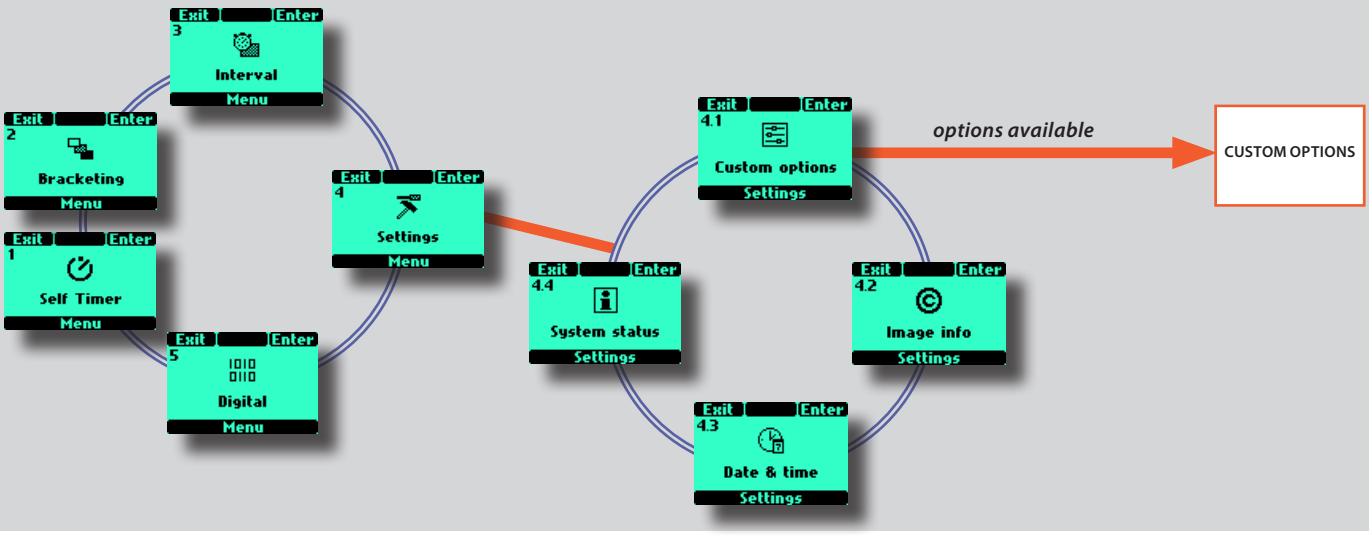
Note

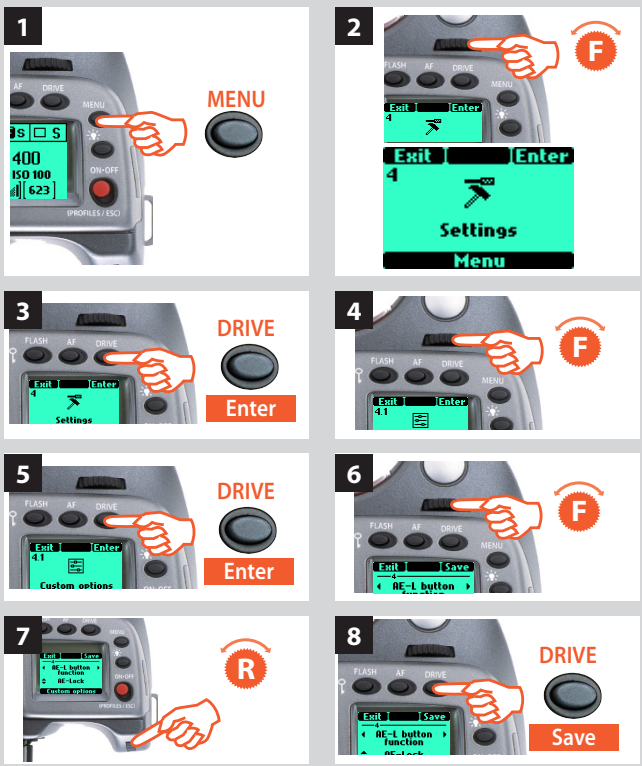
In Custom Options #29 you can select an initial delay of None, 2, 10, 60 seconds or the interval time.

Tip

An Interval setting can be stopped mid-sequence by pressing the ESC button.

4 Settings / 4.1 Custom Options





4 Settings

From the **Settings** screen you can access four main sub-settings: **Custom options**, **Image info, Date & Time** and **System status** by turning the front control wheel. From each of these sub-settings you can access further items for setting changes. Look at the main menu chart to get an idea of where all the options are on the menu tree.

4.1 Custom options

1) *Press the* **Menu** *button on the grip.*
2) *Turn the front control wheel until* **Settings** *appears.*
3) *Press the* **ISO/WB** *(***Enter***) button on the grip.*
4) *Turn the front control wheel to access* **4.1 Custom options**.
5) *Press the* **ISO/WB** *(***Enter***) button to access the 34 choices available.*
6) *Turn the front control wheel to the desired Option.*
7) *Turn the rear control wheel to the desired Setting.*
8) *Press* **Save** *(***Drive***) button.*

In the following list, the options marked in red are the default settings. So, in the case of the User button, for example, as None is the default there will be no reaction from the camera until you make a specific choice and save it.

If you want to reset the camera to the default setting for all options, press the **ON.OFF** button quickly to enter **Profiles**, select **Standard** and then press **Load**.

Tip

As a shortcut to a specific user button (True Focus, AE-L, M.UP, Stop Down) setting in Custom Options, press the MENU and then the desired button with camera in active mode. After making any changes, press the shutter release button to save the new setting.

Tip

As a shortcut to Custom Options level, press the MENU button twice with camera in active mode. The latest setting will automatically appear. After making any changes, press the shutter release button to save the new setting.

4.1 Custom options

The following is a description of all thirty four Custom Options. They are accessed by ***Menu*** > ***Settings*** > ***Custom Options***. The words and figures in red signify the default setting for that option.

Standby timeout 1

• *10s* • *5s* • *15s* • *30s* • *None*

Determines the amount of time the camera remains active before it automatically reverts to standby mode (indicated on the grip display by the H4X logo). Minimizes battery consumption.

EV increment 2

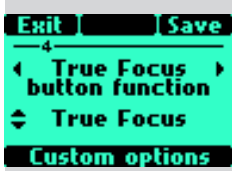
• *1/2 Step* • *1 Step* • *1/3 Step*

Determines the amount of EV change applied (per click of either the front or rear control wheels) to either aperture or shutter speed.

Exp adjust increment 3

• *1/3 Step* • *1 Step* • *1/2 Step*

Determines the amount of EV change applied (per click of the rear control wheels) when making fixed exposure adjustment settings.



True Focus button function 4

• *True Focus*

but can be reassigned to:

AF Drive • AE-lock • Self Timer • Bracketing • Mirror up • Stop Down • B mode • T mode • Flash Measure • Interval timer • Multi Exposure • Cycle LM mode • Expose • Standby • Histogram • IAA toggle • Digital focus check • Delete last image • Grey balance exposure • None

AE-Lock button function 5

• *AE-lock*

but can be reassigned to:

Self Timer • Bracketing • Mirror up • Stop Down • B mode • T mode • Flash Measure • Interval timer • Multi Exposure • Cycle LM mode • Expose • Standby • Histogram • IAA toggle • Digital focus check • Delete last image • Grey balance exposure • None • AF Drive

Stop down button function 6

• *Stop Down*

but can be reassigned to:

• B mode • T mode • Flash Measure • Interval timer • Cycle LM mode • Expose • Standby • Histogram • IAA toggle • Digital focus check • Delete last image • Grey balance exposure • None • AF Drive • AE-lock • Self Timer • Bracketing • Mirror up

M.UP button function 7

• *Mirror up*

but can be reassigned to:

• Stop Down • B mode • T mode • Flash Measure • Interval timer • Multi Exposure • Cycle LM mode • Expose • Standby • Histogram • IAA toggle • Digital focus check • Delete last image • Grey balance exposure • None • AF Drive • AE-lock • Self Timer • Bracketing

Control wheel direction 8

• *Clockwise* • *Counter clockwise*

Determines the effect the direction of the controls wheels have on a setting.

For example, by moving the front control wheel to the left you can alter the aperture setting from f/8 to f/6.8 to f/5.6 and so on. By changing the wheel direction setting however, the same action of turning the wheel to the left would then produce the opposite effect, that is, the aperture settings would change from f/ 8 to f/ 9.5 to f/ 11, and so on.

Flash ready exposure lock 9

• *Yes* • *No*

Allows you to make a capture before the flash is fully charged. For use with integral flash unit or other TTL compatible flash units connected to the hot-shoe. Not valid for flash units connected by the PC connector.

Yes *blocks the shutter until flash is ready.*

No *allows shutter release before flash is ready.*

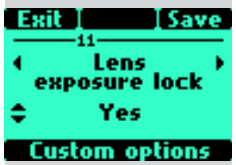
Magazine exposure lock 10

• *Yes* • *No*

Allows you to release the lens and auxiliary shutter in camera body without a digital back attached.

Yes *blocks the lens shutter and auxiliary shutter in camera body if the digital back is not attached. Generates message on grip display if attempted.*

No *allows the lens shutter and auxiliary shutter in camera body to be released without the digital back attached.*



Lens exposure lock 11

• *Yes* • *No*

Allows you to release the auxiliary shutter in camera body without a lens attached.

Yes *blocks the release of auxiliary shutter in camera body if there is no lens attached. Generates message on grip display if attempted.*

No *allows a release of auxiliary shutter in camera body without a lens attached.*

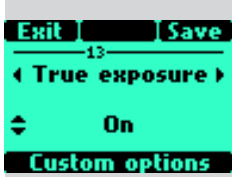
Out of range exposure lock 12

• *No* • *Yes*

Allows you to release the camera when either the aperture or shutter speed setting is beyond the working range (indicated on the displays by "–").

Yes *blocks the shutter if beyond the working range.*

No *allows the shutter to be released (1/800s or 32s) if beyond the working range.*



True exposure 13

• *On* • *Off*

Determines whether the exposure is automatically adjusted to create a true exposure setting. (See ***Appendix*** for full explanation).

On *allows the adjustment.*

Off *retains the normal setting.*

Note

If using flash/strobe as the main light source and 1/800s shutter speed, re-member to turn off the True Exposure option.

Spot mode 14

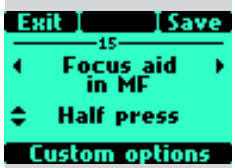
• *Normal* • *Zone*

Determines how the camera behaves when set to Spot Mode.

Normal *makes the camera behave in the same fashion as when set to Average or Centre Weighted.*

Zone *makes the camera behave in the same fashion as the Hasselblad 205FCC. That is, the central spot is placed over a particular area of the subject and the AE-L button is pressed. The exposure is then calculated assuming that the metered area is 18% grey or Zone 5 and is indicated on the display as Zone 5. Alternatively, the area can be reassigned to another zone by turning the rear control wheel.*

Then, when the camera is moved, the areas within the central spot are indicated by their zone values.



Focus aid in MF 15

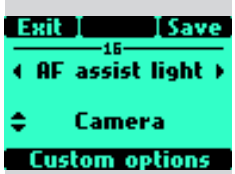
• *Half press* • *Always* • *Off*

Sets how the focus aid arrowhead LED symbols appear in the viewfinder display in manual focus mode.

Half press *makes them visible when the shutter release button is pressed half way.*

Always *makes them visible all of the time when camera is active.*

Off *disables them completely.*



AF assist light 16

• *Camera* • *Off* • *Ext flash*

Allows projection of light pattern to assist the autofocus system in poor light or low contrast situations.

Camera *sets the integral AF assist illumination to be always active.*

External flash *activates the AF assist illumination projected by a suitable attached external flash unit. When detached, however, the integral system is automatically used.*

Off *sets the AF assist illumination to remain always inactive.*

Rear wheel quick adjust 17

• *Yes* • *No*

Allows rear control wheel to make a rapid EV adjustment (or EV compensation) in auto-exposure mode.

Yes *turns the setting on. By turning the rear control wheel, the adjustment is made and appears on both displays as a ± symbol between the shutter speed and aperture values. The amount of deviation also appears above the scale to the left of the aperture value on the viewfinder display.*

No *turns the function off completely.*

Control lock 18

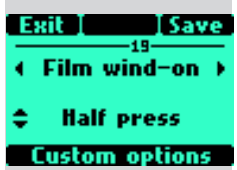
• *All controls* • *All except user* • *Wheels* • *Off*

Sets the amount of locking used when the Control Lock (**FLASH**) button is pressed.

All controls *locks control wheels and buttons.*

Wheels *locks only control wheels. They remain operable in any setting mode, however.*

Off *disables lock function.*



Film wind on 19

• *Half Press* • *Direct*

Sets when the film will be advanced to the first frame.

Half Press *advances the film only when the shutter release is pressedto half press position.*

Direct *advances the film automatically to the first frame when the film holder is inserted or when the magazine is attached.*

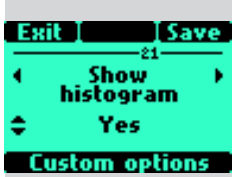
Beeper 20

• *On* • *Off*

Sets the audible beeper signal.

On *enables the signal.*

Off *disables the signal.*



Show histogram 21

• *Yes* • *No*

Sets whether a histogram of a capture appears on the display after exposure.

Yes *enables the setting.*

No *disables the setting.*

Interval & Self Timer 22

• *Exit* • *Stay*

Allows either the Interval or Self Timer mode to remain active after a capture or immediately return to standard setting.

Exit *clears the setting and produces an automatic return to standard setting after a capture.*

Stay *retains the setting after a capture.*

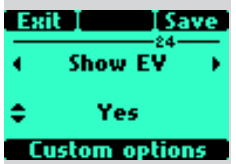
AE lock / Quick adjust 23

• *Exp reset* • *Saved*

Allows either the AE-Lock or Quick adjust mode to remain active after a capture or immediately return to standard setting.

Exp Reset *clears the settings and produces an automatic return to standard setting after a capture.*

Saved *retains the AE-Lock or Quick adjust settings after a capture.*



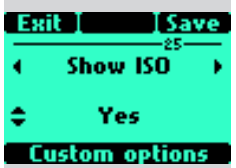
Show EV 24

• *Yes* • *No*

Allows the display of EV settings on the grip display.

Yes *enables the display.*

No *disables the display.*



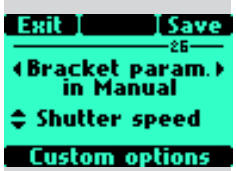
Show ISO 25

• *Yes* • *No*

Allows the display of ISO settings on the grip display

Yes *enables the display.*

No *disables the display.*



Bracket param. in Manual 26

• *Shutter speed* • *Aperture*

Selects either the shutter speed or the aperture as the parameter which changes in a bracketing sequence when in Manual exposure mode.

Shutter speed *selects changes in shutter speed.*

Aperture *selects changes in aperture settings.*

Aperture control in Manual 27

• *Front wheel* • *Rear wheel*

Selects which control wheel changes the aperture setting when in Manual exposure mode.

Front wheel *selects the front control wheel to change the aperture setting.*

Rear wheel *selects the rear control wheel to change the aperture setting.*

Low flash warning 28

• *On* • *Off*

Controls the display of the 'Low flash' warning message and triangle.

ON *enables the function.*

OFF *disables the function.*

Interval timer initial delay 29

• *None* • *2s* • *10s* • *60s* • *Interval time*

Allows an initial delay before the first capture of an interval timer function operation.

Aperture indication 30

• *Normal* • *Light meter*

Allows choice of aperture indication display (in Manual mode only).

Normal *selects conventional display (f5.6, f8, etc)*

Light meter *selects 'light meter' type display (f5.6^{0}, f8.^{5}, etc)*

Extra mirror-delay 31

50 ms • *100 ms* • *200 ms* • *None* • *25 ms*

Extends the delay period between the mirror being raised and the opening of the lens shutter thereby reducing the negative effect of vibration on longer exposure times.

True Focus in AF-S 32

• *Off* • *on*

Re-assigns half press of shutter release button to activate True Focus function instead of standard automatic focus (single)

Always return mirror 33

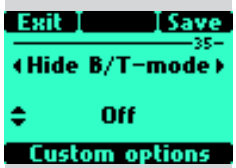
• *No* • *Yes*

Automatically lowers mirror again for viewing at the end of every mirror-up sequence.

AE lock at half press 34

• *Off* • *On*

Allows access to AE-lock without having to use customizable button assigned to other required functions.



Hide B/T mode 35

• *Off* • *On*

Hides access to B and T shutter speeds allowing smoother transition from 1s to 1.4s when making shutter speed changes.

Customizable button function list

The **TRUE FOCUS, AE-L, STOP DOWN** and **M.UP** buttons can all be reassigned to different functions. Default settings are as according to name.

None
The button has no function.

True Focus
Activates True Focus function.

AF
Activates the AF system in any focusing mode. When the button is pressed the AF system sets the correct focusing point automatically. This is a rapid, accurate and handy way of using the AF system when the camera is set to manual focus mode. In this manner you take advantage of the accuracy and certainty of the autofocus system while retaining the control inherent in manual focusing mode.

AE-lock
Activates AE lock function.

Self timer
Initiates self timer function.

Bracketing
Initiates bracketing function.

Mirror up
Controls the mirror up or down function (same function as the M-UP button).

Stop down
Stops the lens down.

B mode
Sets the shutter speed to B exposure mode.

T mode
Sets the shutter speed to T exposure mode.

Flash Measure
Initiates flash measure function.

Interval timer
Initiates interval timer function.

Cycle LM mode
Changes the light-metering method in a loop manner: Centre Weighted/ CentreSpot/Spot.

Expose
Acts as alternative shutter release button.

Standby
Sets the camera in standby mode to save battery consumption.

IAA toggle
Allows IAA rating change of last capture.

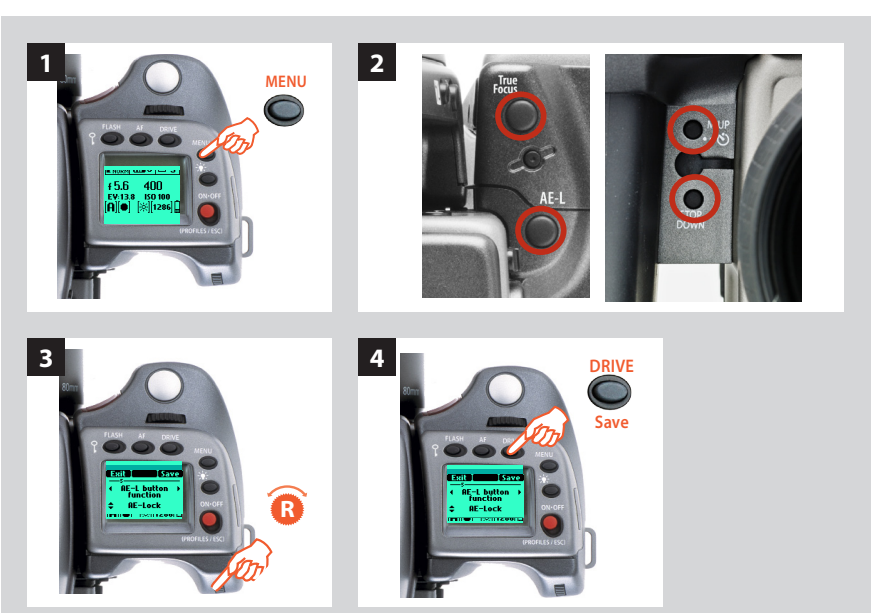
The following functions may only be accessible with some digital backs.

Histogram
Recalls the last shown histogram on the grip LCD.

Dig. foc check
Displays last exposure taken at 100% scale on digital backs with LCD.

Delete last image
Activate the delete function for the last image in a digital back.
(to be implemented at a later stage).

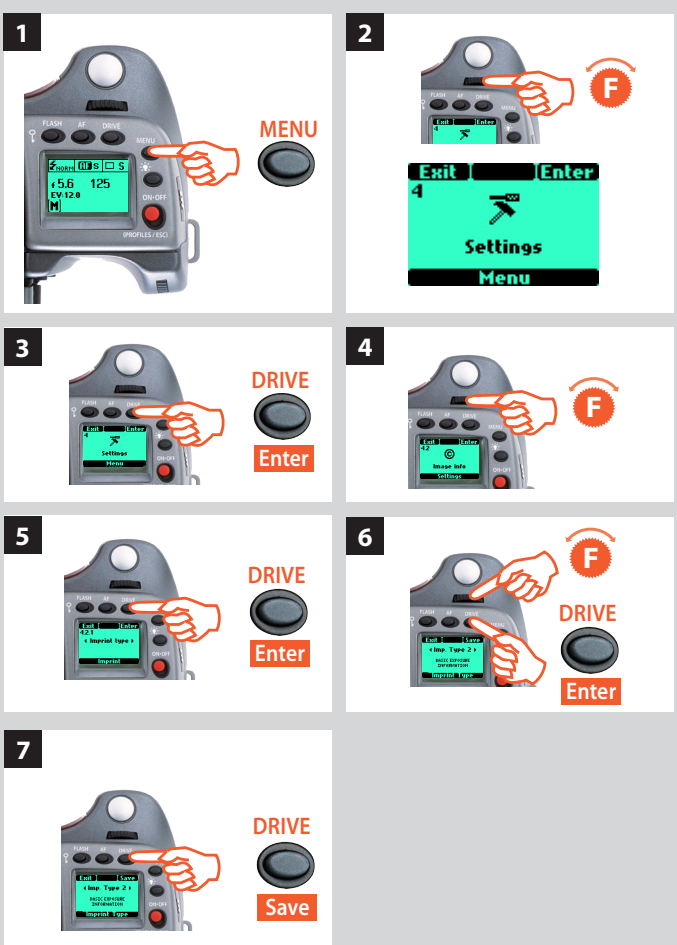
Grey balance exp.
Initiates a grey balance exposure using the marker frame to select the desired tone.



1) *Press the* **Menu** *button.*
2) *Press the button you want to reassign* **(True Focus, AE-L, M.UP** *or* **Stop Down).**
   This directly accesses the particular button you chose at the **Custom options** *level in the menu.*
3) *Rotate the rear control wheel to select the function you want the button to activate.*
4) *Press the* **Save** *button.*

4.2 Image Info / 4.2.1 Imprint type

Applicable only when film magazine attached.



4.2 Image Info

The **Imprint type** *facility controls the text that will appear along the edge of each frame on a film. It is possible to imprint approximately 40 characters at one time.*

Imprint Type *records technical information automatically created by the camera.*

4.2.1 Imprint type

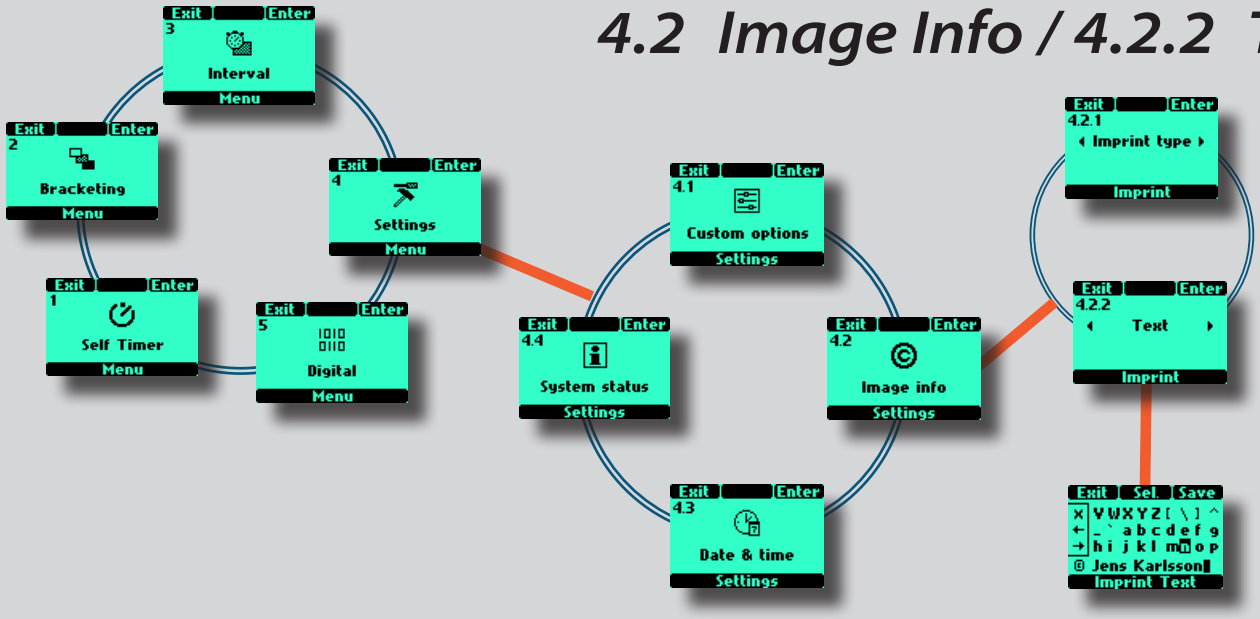
The following can be chosen as an option:

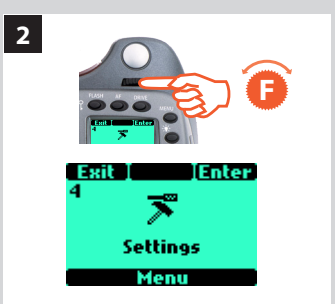
- **Imp. Type 1** prints the relevant information: aperture, shutter, metering mode, exposure mode, exposure compensation and flash compensation.
- **Imp. Type 2** prints the relevant basic information only: aperture, shutter, and exposure correction.
- **Date & Time** prints date & time only (the correct date and time is set through the Settings menu under 'Date & Time'.)
- **Text & Date** prints text plus date
- **Text & Info** prints text plus basic info
- **Text** prints text only (that you have created in 4.2.2 Text)

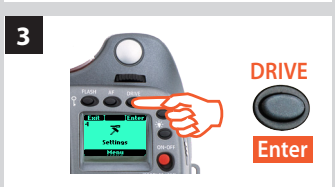
Imprint type setting

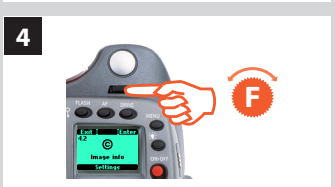
1) *Press the* **Menu** *button on the grip.*
2) *Turn the front control wheel until* **Settings** *appears.*
3) *Press* **Enter** *(***Drive** *button) on the grip.*
4) *Turn the front control wheel to access* **4.2 Image info**.
5) *Press* **Enter** *(***Drive** *button) to* **4.2.1 Imprint type.**
6) *Press* **Enter** *(***Drive** *button) again and turn the front control wheel to select the desired option.*
7) *Press* **Save** *(***Drive** *button) on the grip.*

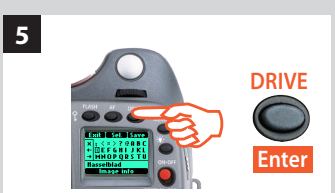
4.2 Image Info / 4.2.2 Text











4.2.2 Text

In **Text** *you can compose your own combination of letters, words, symbols, etc to be included in the metadata. The same procedure is also used to change a Profile name.*

1) *Press the* **Menu** *button on the grip.*
2) *Turn the front control wheel until* **Settings** *appears.*
3) *Press the* **Enter (Drive)** *button on the grip.*
4) *Turn the front control wheel to access* **4.2 Image info**.
5) *Press the* **Enter (Drive)** *button to* **4.2.2 Text**.
6) *On the left side of the screen there is a small box frame containing an* **X** *symbol and two arrow symbols. By turning the front control wheel, the selector cursor will enter the box and by turning the rear control wheel the selector cursor will move up and down.*

- *When the* **X** *in the box is highlighted and the* **Sel.(AF)** *button is pressed, the character highlighted in the text line lower down the screen will be deleted.*
- *When an arrow in the box is highlighted, the text line cursor moves along the text line in the arrow's direction, moving past every character with every click on the* **Sel.(AF)** *button to the desired position. The highlighted character in the text line can then be replaced by a new character chosen by moving the selector cursor out of the box, positioning it over the new character to highlight it, and then pressing the* **Sel.(AF)** *button.*
- *By turning the front control wheel, the cursor moves horizontally.*
- *By turning the rear control wheel, the cursor moves vertically and introduces all available characters by scrolling the screen.*

1

2

3

4

5

6

7

8

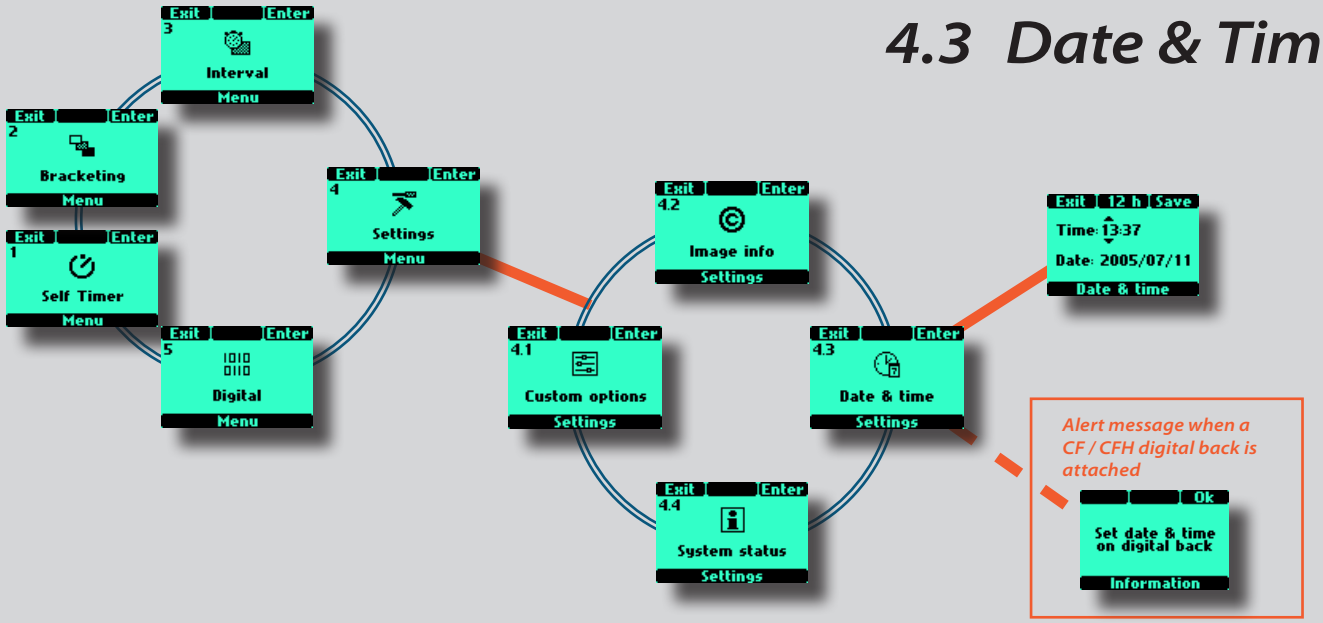
Changing text - an example

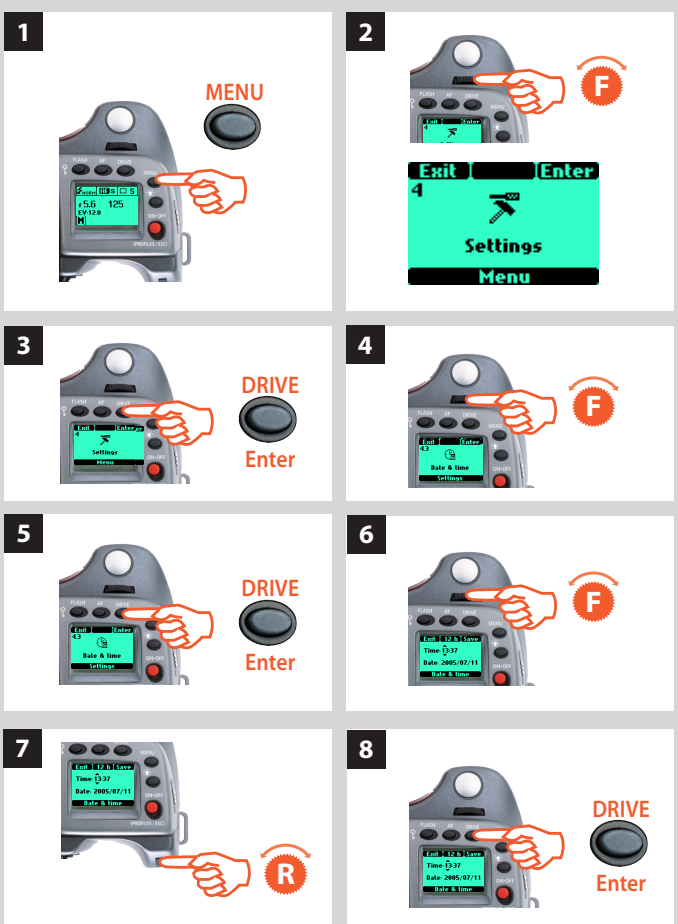
Here is an example of how to change existing text (in this case the word 'Text' to a copyright symbol plus a photographer's name -'Jens Karlsson'). See previous section **4.2 Image info** for procedure description.

1) *Start by accessing the* **Image info** *screen. On the text row towards the bottom of the screen, the text line cursor is automatically placed to the right of the character that is to be changed. Turn the front and rear control wheels to move the selector cursor until the X symbol is highlighted.*
2) *Press* **Sel.** *(***AF** *button) and the character will be erased.*
3) *Repeated pressing of* **Sel.** *will progressively erase all the characters in the line.*
4) *After erasing unwanted text, turn the front and rear control wheels until the desired character is highlighted by the selector cursor (in this case the copyright symbol) and press Save. Note that more symbols have automatically appeared as you scrolled down the screen.*
5) *Choose the next character in the same manner (in this case a space) and press* **Save**.
6) *The capital letter 'J' has been highlighted and saved in this example.*
7) *Repeat the procedure until all the letters and characters you want appear. As you progress with more characters, those to the left will temporarily disappear from the screen so that you can see what you are adding. Don't forget there is a maximum of approximately 40 characters.*

   If you make a mistake you must remove each character singly (see steps 1-3 above) until you reach where you want to make a change and then return to the 'Adding text' procedure again.
8) *This example shows a completed 15 character text line with symbols, spaces, upper and lower case (large and small) letters.*

4.3 Date & Time





4.3 Date & Time

Adjust date and time settings by the following procedure:

1) *Press the* **Menu** *button on the grip.*

2) *Turn the front control wheel until* **Settings** *appears.*

3) *Press the* **Enter** *(***Drive***) button on the grip.*

4) *Turn the front control wheel to access* **Date & Time**.

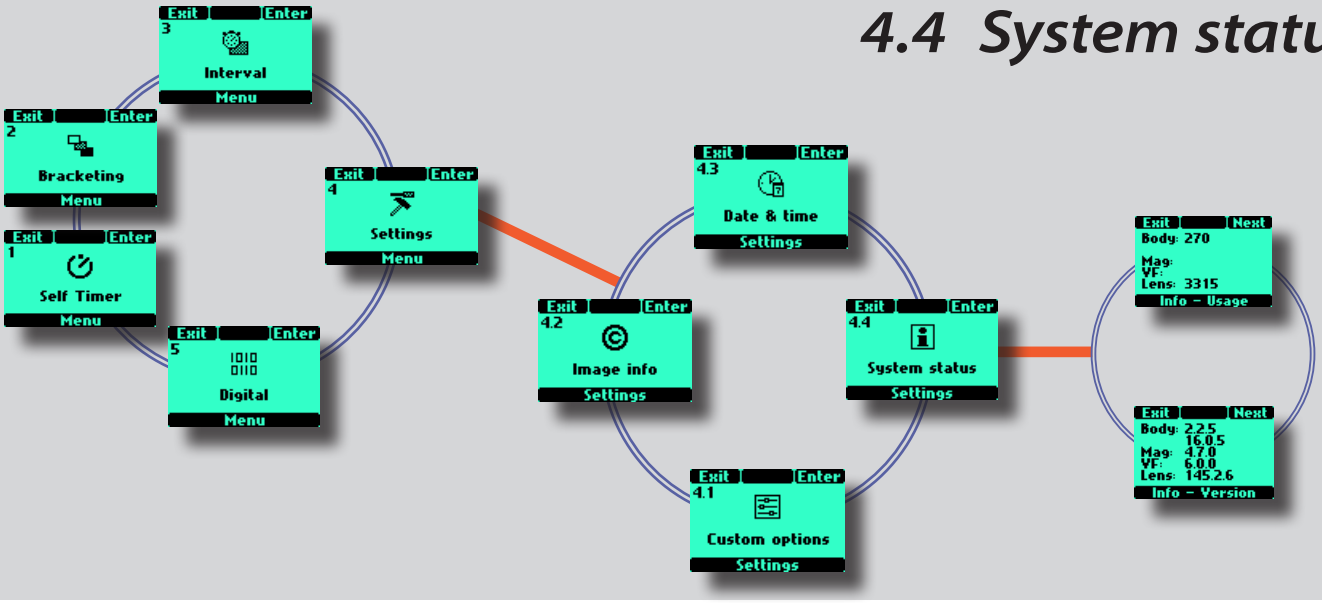
5) *Press the* **Enter** *(***Drive***) button.*

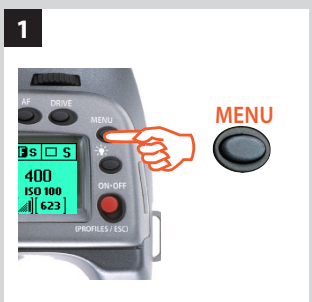
6) *By turning the front control wheel you can move the cursor to mark the following for change: hours, minutes, year, month and day respectively. By pressing the 24 h button (AF), you can choose between a 24 hour or 12 hour system for time.*

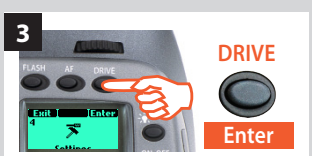
7) *Turn the rear control wheel to make the changes when the cursor is correctly positioned.*

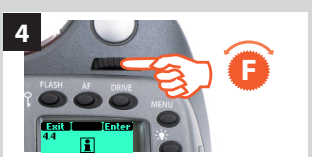
8) *Press the* **Save** *(***DRIVE***) button to store the new setting.*

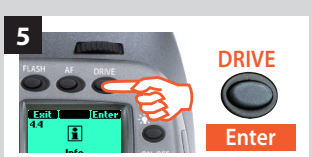
4.4 System status

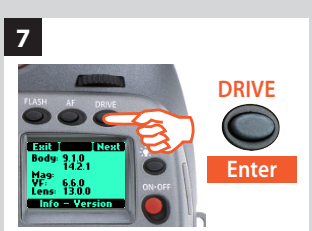












4.4 System status

Check component usage and general servicing information as follows:

1) *Press the* **MENU** *button on the grip.*

2) *Turn the front control wheel until* **Settings** *appears.*

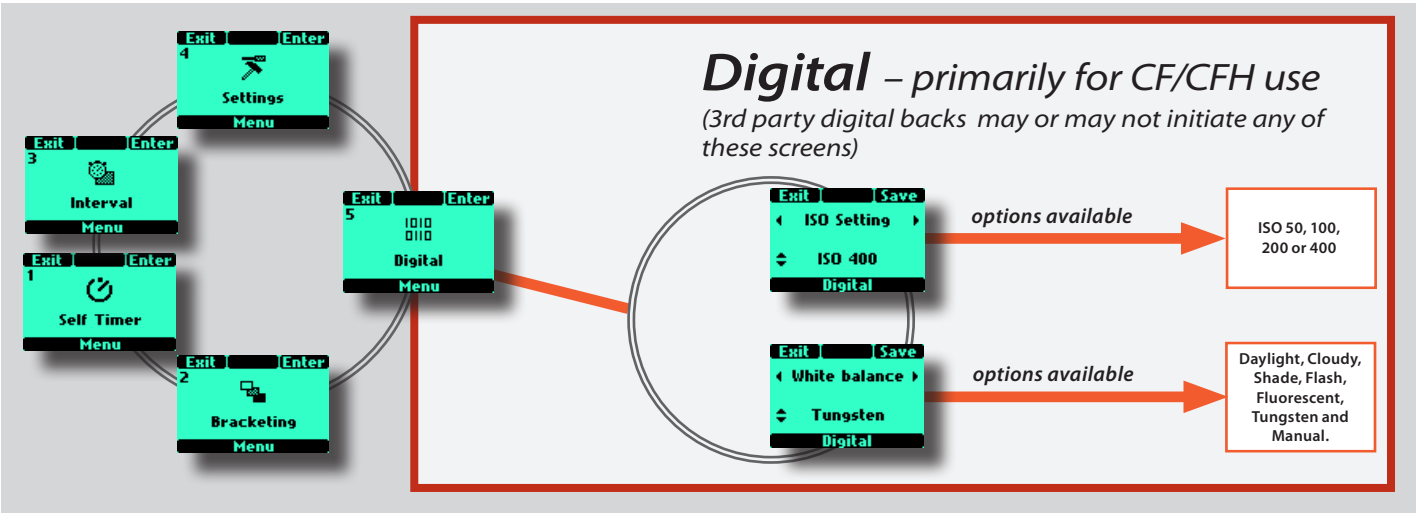
3) *Press the* **Enter** *(***DRIVE** *button) on the grip.*

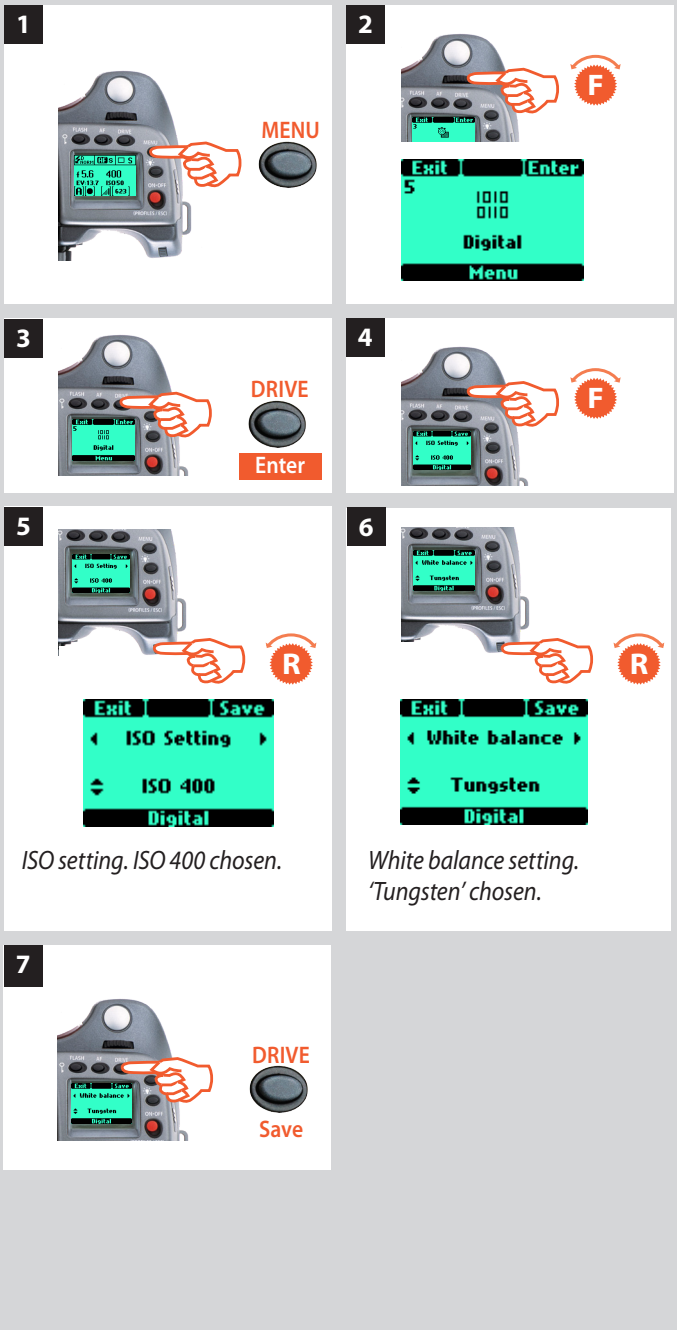
4) *Turn the front control wheel to access* **System Status**.

5) *Press the* **Enter** *(***DRIVE** *button).*

6) *The display now shows a list of camera components* **Info-Usage** *and to the right of each individual component a figure that represents the number of actions taken by that component. Please note that even a completely new camera will have registered actions as these occur during testing before delivery.*

7) *Press the* **Next** *(***ISO/WB***) button to display* **Info-Version** *to display the software version for each item. Press the* **Next** *(***ISO/WB***) button again to display* **Info-Calib** *for focus calibration information.*





5 Digital *(primarily for CF/CFH use)*

From the **Digital** *screen you can choose between various white balance and ISO settings. These camera settings will override any such settings made on the digital back and will show up on the digital back display as new settings.*

ISO & White Balance settings

1) *Press the* **MENU** *button on the grip.*
2) *Turn the front control wheel until* **Digital** *appears.*
3) *Press* **Enter** *(***Drive** *button) on the grip.*
4) *Turn the front control wheel to access either of the two options, that are:*

   ISO setting *and* **White Balance**

5) *In* **ISO setting**, *turn the rear wheel to choose between:* ***50, 100, 200 or 400.***

6) *In* **White Balance**, *turn the rear wheel to choose between:* ***Daylight, Cloudy, Shade, Flash, Fluorescent, Tungsten and Manual.***

7) *Press* **Save** *(***Drive** *button) to save the setting.*

Note

3rd party digital backs, may or may not be able to initiate the appearance of the **Digital** *screen and its settings.*

Please refer to the appropriate user manuals for information.

H4x

9

Flash / Strobe
– controls and displays

- **Sync at all shutter speeds to 1/800s**
- **Integral fill-flash**
- **SCA 3002 compatible**
- **Flash measure capability**
- **Rear sync capability**

Photo: Mark Holthusen / Hasselblad Masters

The H system meets professional demands for a variety of situations where flash is required.

It includes an integral flash primarily intended for fill-flash use but strong enough for simple close work.

Combined with an adapter and a portable unit, H cameras can exploit the automatic features offered by Metz and other top names in the field for powerful and reliable solutions

When in the studio, the H system is capable of providing flash metering for maximum control and security.

Note

As with all strobe/studio flash use, very particular attention should be taken to ensure correct connections and general handling practice. Potential dangers might increase when cameras are also connected to electronic peripherals (computers, lighting units, etc) and should diminish when IR and similar wireless flash release devices are used.

Victor Hasselblad AB and Hasselblad A/S can accept no responsibility whatsoever for accidents that might occur or damage caused when Hasselblad equipment is used in combination with third-party units of any description.

Note

Only flash units specially adapted for use with the H4X should be connected to the hot shoe on the camera.

The H4X can be used together with most flash units in manual mode. However, to make use of a TTL automatic function, you must ensure the flash unit is compatible with the SCA 3002 system. Connection is either by the PC socket or by the hot shoe (see warning note below).

The viewfinder houses an integral fill-flash with a guide number of 12 and features OTF/TTL flash control. This unit is capable of providing enough illumination for many fill flash functions outdoors as well as simple indoor shots at shorter distances.

Flash output can be adjusted separately from ambient exposure for optimum control.

Separate flash units can be used in dedicated mode when connected to the hot shoe if the unit is compatible with the SCA3002 (Metz) system using a Hasselblad SCA3902 adapter. This provides a cable free link up for information transfer.

Flash synchronisation can be set to normal or rear (the beginning or end of a capture).

Please see the relevant user manuals for information regarding separate flash units.

General

When using the **A** or **S** setting together with flash, the exposure requirements of the camera will dominate which might produce slow shutter speeds indoors, for example, requiring the use of a tripod. If, on the other hand, you select **P** or **Pv** instead, then a shutter speed of 1/60 or faster is automatically chosen by the camera enabling you to hand hold.

When using flash close up or when using larger aperture settings, remember that the flash unit's output has a specific minimum duration which might still be too great for correct exposure. Read the unit's output specifications for further information regarding any potential restrictions.

You can use the flash metering capability with external flash units of all kinds (TTL flashes must be set to Manual mode).

Rear sync is a useful feature used either for effect or to produce a more 'natural' look when combining long exposures involving light trails and flash.

When using suitable dedicated units (compatible with SCA3002), adjustments are made automatically and governed by the settings on the camera. This applies to whether the flash unit is set to TTL or whether it is set to its own integral metering system (A).

Control of either the integral flash unit or separate SCA3002 compatible flash unit regarding the two functions, exposure compensation and shutter sync, is via the grip. The flash measure function can be used for flash units that are not SCA 3002 compatible or for SCA 3002 compatible units at manual setting.

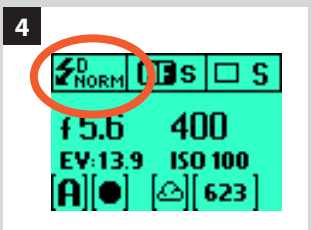
To change the balance between flash output and camera exposure requirements to produce a variety of effects, use the exposure compensation function. For various long exposure effects use the sync function. To make flash exposure tests use the flash measure function.

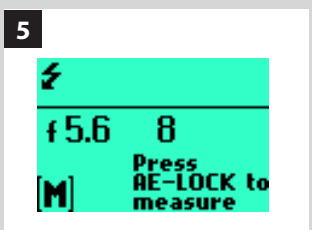
Note

Do not attempt to connect a flash unit dedicated for use with another camera brand via the hot shoe. The flash unit and / or camera could be damaged.

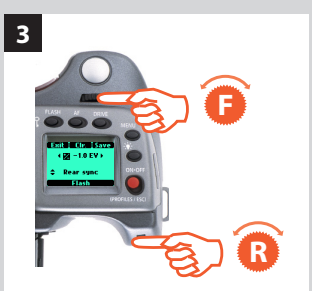
Note

If using flash/strobe as the main light source and 1/800s shutter speed, remember to turn off the True Exposure function (Custom Option #13).





Example of viewfinder display showing Flash set to Rear sync as well as '- 1EV' exposure compensation.



To access the controls:

1) *Activate the camera and press the* **FLASH** *button once.*
2) *Turn the front control wheel to set the amount of compensation required:*
   - *from +3EV through -3EV*
   - *press* **Clr** *(***AF** *button) to clear the setting quickly if required.*
3) *Turn the rear control wheel to set:*
   - *normal sync (flash triggered just after the shutter opens)*
   - *rear sync (flash triggered just before the shutter closes)*
   - *flash measure (with non-TTL flash units or TTL units in Manual mode)*
4) *The grip display shows the flash mode - Normal or Rear - in the standard display.*
5) *When set to Flash Measure, a specific screen requests you to press the AE-L button in order to make a reading. See below for details.*

Integral flash

The integral flash unit features the following specifications:

Guide no.	12
Coverage	56º horizontal, 44º vertical
Maximum light fall-off at side centres	- 1EV (50%)
Color temperature (full flash)	5,000 – 5,600º K

To raise the flash unit into its operative position, slide the flash-unit catch backwards in the direction of the flash symbol. To return the flash unit into its closed position, push down on the top of the unit until it clicks back into place. The flash unit is automatically activated when it is in the operative position and de-activated when returned to its stored position.

The green LED flash symbol blinks in the viewfinder when the flash unit is charging and remains stationary when fully charged. The flash output can also be adjusted for optimum light balance in fill-flash situations.

Using the integral flash:

1) *Slide the flash-unit catch backwards in the direction of the flash symbol.*
2) *Press the* **FLASH** *button.*
3) *Choose between* **Normal** *or* **Rear** *sync by turning the rear control wheel and the amount of compensation (if required) by turning the front control wheel.*
4) *Press* **Save** *(***ISO/WB** *) button. Make an exposure.*

Note

Do not use the integral flash together when another external TTL flash unit is connected (and used in TTL or A mode).

Note

For full coverage with the integral flash, use 80mm or longer lenses (without a lens shade).

1

Red warning triangle and green LED flash symbol to left of viewfinder LCD display.

1

2

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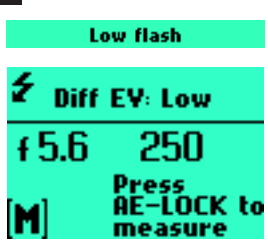

Tip

The 'Low Flash' warning can be turned off in Custom Option #26 if preferred.

5) *If the settings were incorrect to match the output of the flash unit, the viewfinder display shows a red triangle alongside a flashing green 'flash' symbol plus a warning message - '***Low flash***'. The grip display will also show a warning message - '***Low flash***'.*

Conventional measures should then be taken to correct the situation. (That is: move closer to the main subject, use a larger aperture setting or use a higher ISO setting).

Separate flash unit connection and use

Separate flash units can be electrically connected either by way of the hot shoe accessory holder (see previous warnings) on the top of the viewfinder or via a cord to the PC connection port on the left hand side of the camera body. Slave unit switches/ transmitters can also be connected similarly dependant on unit (see specific user manuals for details).

Keep the plastic safety cover in place in the hot shoe when not in use.

Flash measure of separate flash unit

You can measure the effect of an attached flash unit (with PC connected flash units and SCA3902 compatible flash units set to **M** mode), where the camera acts much as a flash meter would. The aperture setting can be adjusted and more trial exposures made until the information on the grip display is satisfactory.

To use flash measure:

1) *Press the* **FLASH** *button on the grip to access the flash option screen.*
2) *Turn the rear control wheel until* **Flash measure** *appears.*
3) *Press* **Save** *(***DRIVE b***utton) to access the flash exposure screen.*
4) *Make preliminary required aperture setting by turning the front control wheel.*
5) *Press the* **AE-L** *button. The camera will close the aperture, raise the mirror and fire the flash. Light reflected from the flash lit subject will be reflected off a white spot on the auxiliary shutter to the meter sensor.*
6) *Deviations from a normal exposure are displayed as differences in EV on the grip display and the viewfinder display. If '***high***' or '***low***' appears, change the aperture accordingly and make a new test reading.*

Change the aperture until **Diff EV: 0** *appears, or the desired amount of deviation from the normal exposure.*

Diff EV: Low *signifies more than 2 EV under*

Diff EV: High *signifies more than 2 EV over*

H4x

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Optional Accessories

Photo: Mark Holthusen / Hasselblad Masters

Optional accessories provide the opportunity to extend the capabilities of your system or just to add extra convenience to suit your way of working.

HVM waist level viewfinder
(3053328)

The HVM waist level viewfinder allows a comfortable lower viewing angle either for effect or where eye contact with the subject is desirable in portrait photography, for example. Autofocus function of all lenses fully retained. Optimized for horizontal format shooting and not suitable for vertical format use.

Proshade V/H 60 – 95
(3040740)

An adjustable bellows lens shade that provides highly efficient protection against stray light. Its compact, flat folding design saves space in the equipment case. With adapters fits all HC lenses and virtually all V system lenses. Also features a filter holder for glass, gelatin, or plastic filters.

Proshade adapters
(3043415, 3043417, 3043419)

67mm, 77mm and 95mm adapters with bayonet mount for HC lenses. Features lock to provide positive and secure attachment.

Tripod quick coupling H
(3043326)

Mounted on a tripod, this accessory facilitates rapid attachment and removal of the camera. The camera is firmly held in an exact and repeatable position. Two integrated spirit levels make horizontal positioning of the camera easy. The Tripod quick-coupling H fits 1/4" and 3/8" tripod threads and has a safety catch.

Flash adapter SCA 3902
(3053393)

For connecting flashes compatible with the SCA 3002 system to the Hasselblad H4X.

UV-sky filters
(3053470, 3053474 and 3053478)

Absorbs UV radiation and reduces blue haze without affecting colors. Also protects the front lens surface. Particularly recommended when the camera is used in harsh conditions. Available in three sizes to suit various lenses: UV-sky 67mm (3053470), UV-sky 77mm (3053474) and UV-sky 95mm (3053478).

Pola filters
(3053482, 3053486 and 3053490)

Reduces non-specular reflections and glare. Increases color saturation in general. Can intensify a blue sky. Available in three sizes.

Support strap with Quickplate H
(3045154)

Improves comfort and security with hand-held photography. Complete with quick plate H.

Camera strap H
(3053616)

Extra wide camera strap with anti-slip backing.

HVD 90x / HV 90x & 90x-II viewfinders
(3053330, 3053326, 3053334)

90 degrees reflex viewfinder, providing 100% field of view even when wearing eyeglasses. Includes built-in fill flash and multi-mode light metering system.

Angle finder H
(S100A12359A00)

Angle finder for the HV 90x and the HVD 90x viewfinders. Enables vertical viewing angle regardless of camera position. Requires a minor modification to the viewfinder eyepiece.

DC power grip

(3043350)

Removable H-camera grip with AC power adapter for supplying camera power from domestic mains supplies.

Battery grip rechargeable 7.2V Li-on

(3043348)

Removable H-camera grip containing rechargeable Li-ion battery with capacity of up to 1850 mAh.

Battery charger for Li-on battery

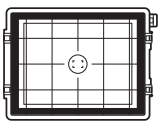
(3053568)

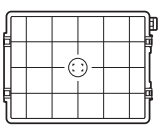
Removable H-camera grip containing rechargeable Li-ion battery with capacity of up to 1850 mAh.

Release cord H

(3043370)

Remote release cord with a cable length of 0.5 m.





Focusing screens

All focusing screens are of the Spherical Acute-Matte D type with or without grid and central markings for spot (ø 7.5) and AF metering area. Grid patterns provide aid in technical, architectural, documentation and other similar fields.

Available with or without masking for the sensor format.

HVM correction lens holder

(3053348)

Lens holder for custom made eyesight correction (lenses available from opticians). To be used for optimal viewing comfort and accuracy.

HC lens accessories

HTS 1.5

(3043400)

The HTS 1.5 is a shift and tilt adapter designed for the HCD28mm, HC35mm, HC50mm, HC80mm and the HC100mm lenses. It not only solves technical challenges but also provides exciting opportunities for creative solutions.

Converter H 1.7X

(3023717)

The Converter attaches between the lens and the body to increase the focal length by a factor of 1.7. This provides a convenient way to expand your range of lenses. The Converter H 1.7 X features the same outstanding optical and mechanical quality as all the lenses in the Hasselblad H system. The optical design consists of 6 elements in 4 groups.

H 13, 26 and 52 Extension tubes

(3053513, 3053526 and 3053542)

The Extension tubes attach between the lens and the body to reduce the close focusing distance for close up photography. They are available in three sizes: 13 mm, 26 mm and 52 mm. As the H4X has a TTL light metering system, exposure compensation is automatic.

CF Adapter

(3043500)

The CF adapter allows virtually all lenses from the V-system to be used on H-system camera bodies. This automatically expands the potential lens range for H cameras by more than a dozen different focal lengths.

Check www.hasselblad.com for further details about lens shades, endcaps, lens pouches etc or news of new accessories.

HC lens range

HCD 4/28mm

HC 3.5/35mm

HC 3.5/50-IImm

HC 2.8/80mm

HC 2.2/100mm

HC Macro 4/120-IImm

HC 3.2/150mm

HC 4/210mm

HC 4.5/300mm

HC 3.5–4.5/50–110mm

HCD 4.0–5.6/35–90mm

V system C type lenses with optional CF lens adapter

Connectivity diagram

Optional viewfinders

HV 90x / HVD 90x viewfinders

HVM waist-level viewfinder

Tilt/Shift

HTS 1.5.
For use with HCD28, HC35, HC50, HC80 and HC100 (including extension tubes)

Accessories

SCA3902 TTL Flash Adapter

H4X Camera

Camera body

Optional V system lenses

CF lens adapter

Lenses

All HC/HCD lenses, including extension tubes and converter

H4x

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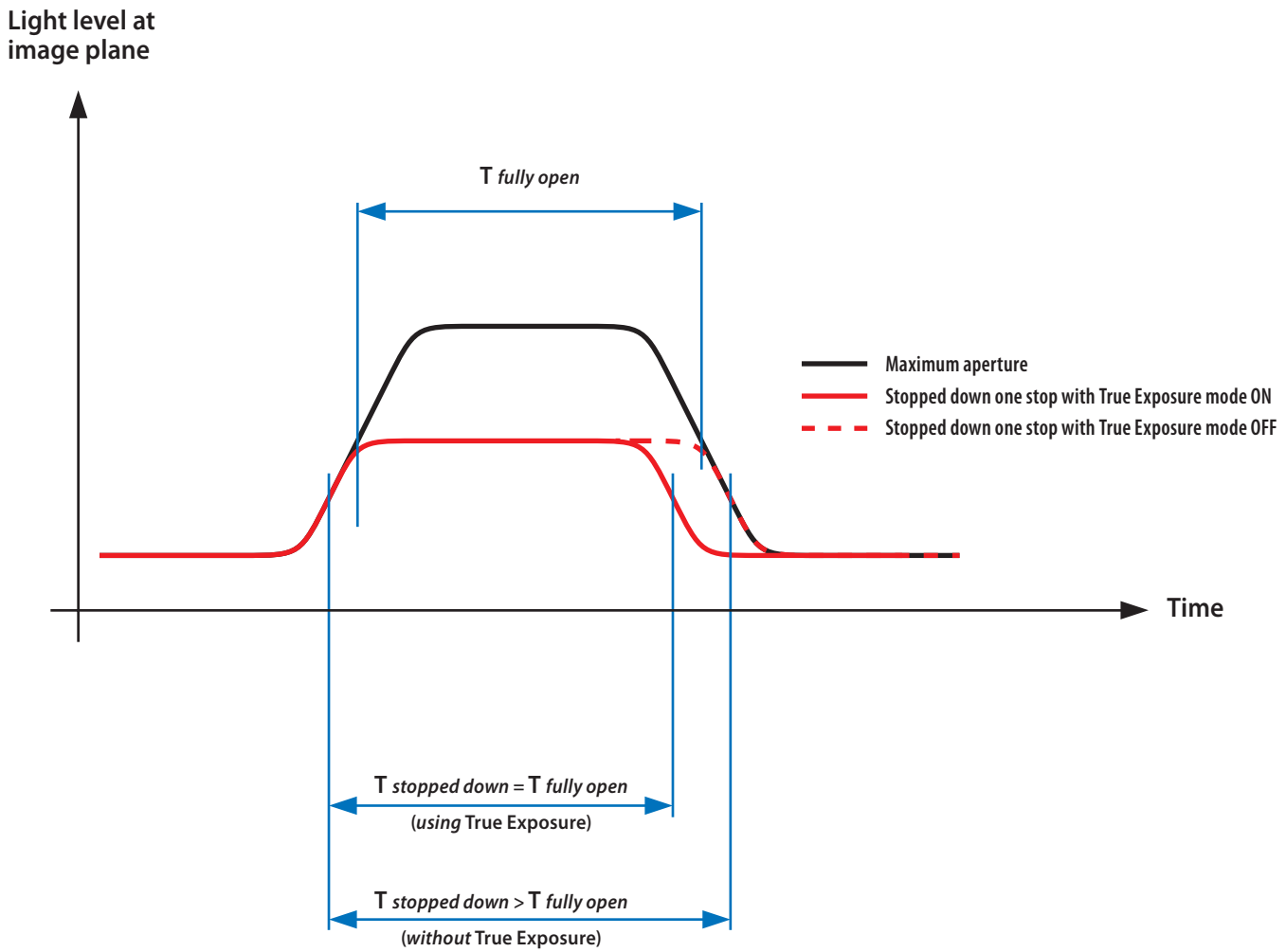
Appendix

Photo: Lyle Owerko / Hasselblad Masters

- P and Pv explanatory charts
- Technical specifications
- Problems, Equipment Care & Service

This section provides an insight into the more technical aspects as well as some important reference information.

True exposure



Note

You can download a fuller explanation of this situation from www.hasselblad.com.

True exposure

True Exposure is an HC/HCD lens function that allows the shutter speed to remain unaffected when stopping down. This effect is perhaps not so commonly understood as it is restricted specifically to integral lens shutters as opposed to focal plane shutters.

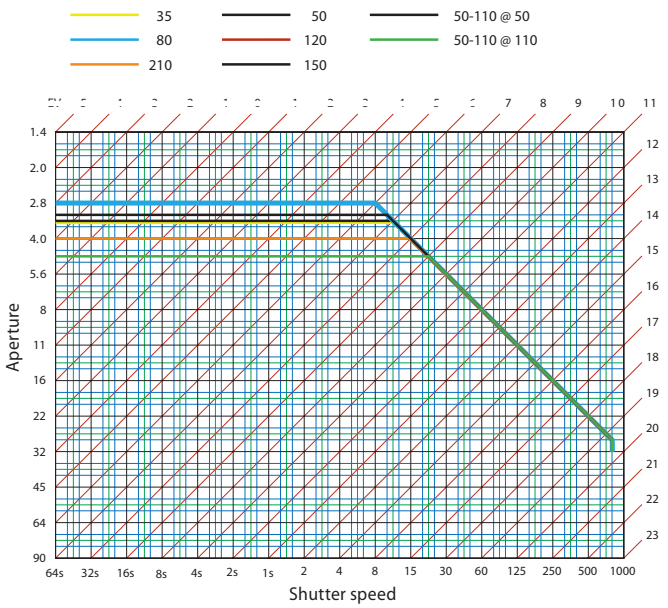
When a lens is stopped down, the effective shutter speed becomes longer, consequently affecting the set exposure. At slow shutter speeds the effect is minimal but at faster speeds, e.g. 1/500s, the effect becomes clearly visible. As Hasselblad knows exactly how the shutters behave in HC lenses, automatic compensatory measures in speed setting adjustments are therefore employed.

As compensation can only be put into effect where speeds can be adjusted, this prevents the possibility of adjusting the fastest speed of 1/800s. To counter this, compensatory adjustments are therefore made to the aperture instead to retain the set exposure.

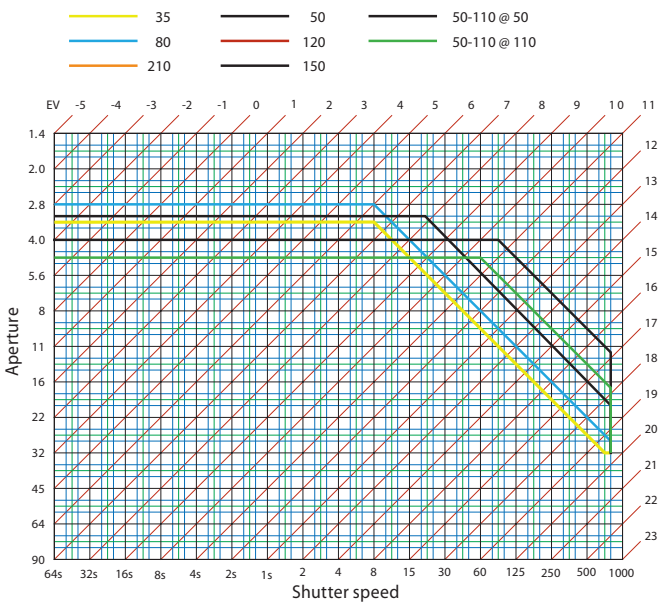
However, this compensation is not always required and when using flash/strobe as the main light source it is actually undesirable because compensation will result in underexposure. Therefore, when using flash/strobe as the main light source, you should set **True Exposure** to **OFF** in **Custom Options #13**.

Automatic exposure – P & Pv Mode

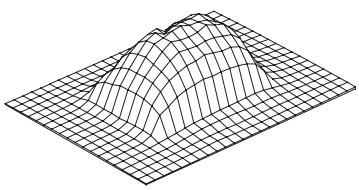
P Mode



Pv Mode

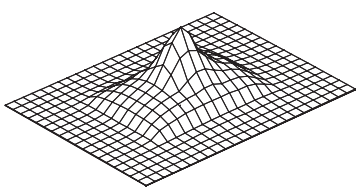


Light metering method sensitivity distribution – (example from HVD-90x)



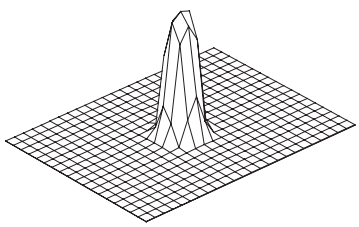
Centre Weighted
(23 x 20 mm)

≈ approx. 25% of a
37 x 49 mm sensor.



CentreSpot
(23 x 20 mm)

≈ approx. 25% of a
37 x 49 mm sensor.



Spot
(diameter 7.5mm)

≈ approx. 2.5% of a
37 x 49 mm sensor.

Technical specifications

Camera Type	Auto-focus, auto-exposure digital SLR camera with interchangeable viewfinders and lenses.
Construction	One piece stainless steel shell. Die-cast aluminium internal structure. Tripod sockets (1/4 and 3/8″) and quick coupling tripod plate for rapid mounting.
Lenses	Hasselblad HC/HCD lenses with built-in electronically controlled shutter and aperture. Automatic or manual focusing with instant manual focus override. All HC/HCD lenses meet the exacting requirements of digital photography. Lens shades can be mounted in reverse for transport. V- system lenses can be used with a CF adapter.
Lens factor	HC – 1.0 / HCD –1.0 (marginal crop).
Viewfinder (HV 90x-II)	A 90° reflex viewfinder, providing 100% field of view even when wearing eyeglasses, and built-in multi-mode light metering system. Image magnification 3.1x. Integrated fill-in flash with guide number 12. Hot-shoe for automatic flash (Metz SCA3002 system / adapter SCA3902). Dot matrix display with presentation of all relevant information. Built-in diopter adjustment from -5 to + 3.5D. Interchangeable.
Focusing	Automatic and manual focusing with electronic focus aid in manual mode. Instant manual focus override.Automatic focusing using passive central cross type phase detection sensor. AF metering range EV 1 to 19 (ISO 100).
Shutter	Electronically controlled lens shutter with speeds up to to 1/800. Flash sync at all speeds.
Flash control	TTL centre-weighted system. Can be used with the built-in flash or a wide variety of flashes compatible with the SCA3002 (Metz) system using adapter SCA3902. ISO range16 to 6400. Flash output can be adjusted (-3 to +3EV) for fill-in purposes independent of ambient light. Synch at all shutter speeds.
Flash measurement	Built-in measurement system that measures flash light from non-TTL flashes, such as studio flashes.
Exposure metering	Multi-mode exposure metering using 90° reflex viewfinder. Metering options are: Spot (diameter 7.5 mm), Centre Weighted, and CentreSpot. Metering range at f/2.8 and ISO100: Spot: EV2 to 21, Centre-weighted: EV1 to 21, CentreSpot: EV1 to 21.
Auto bracketing	Bracketing using predetermined number of captures (2, 3, 5, 7 or 9) in 1/3, 1/2, or 1 EV step difference intervals.
Interval timer	Number of captures from 2 to 'no limit' and interval from 1 second to 1 hour.
ISO range	ISO range: according to digital back model.
Displays	Two dot-matrix displays that provide clear and easy-to-understand information to the user. One is located on the grip and the other in the 90° viewfinder.
Focusing screen	Bright Spherical Acute-Matte type D with sensor format markings. Grid marked type also available as option.
Compatibility	All H System lenses and most accessories. V system C type lenses with optional CF lens adapter.
Accessory connection	Provided with two M5 threads and an electrical connector for accessories.
Customization	A large number of the H4X's functions can be customized by the user to suit specific styles or situations through the built-in menu system.
User interface	Both basic and advanced functions are set using buttons and control wheels in conjunction with the grip display and viewfinder display.

Default Settings ('Default' profile)

Exp.mode		A (Aperture priority)	
LM mode		Centre weighted	
Exp. adjust		0	
Focus mode		AF-S	
Drive mode		S	
Flash sync		Normal (beginning of exp.)	
Flash adjust		0	
Self timer	delay	10 sec	
	Sequence	Mirror up / Delay	
	Mirror mode	Mirror goes down	
Bracketing	Frames	3	
	Sequence	Normal - over - under	
	EV diff	0,5 EV	
Interval timer	Frames	3	
	Interval	0 min 30 sec	
Custom options	1	Standby timeout	10 sec
	2	EV increment	1/2 step (0.5 EV)
	3	Exp adjust increment	1/3 step (0.3 EV)
	4	True Focus button function	True Focus
	5	AE-Lock button function	AE-lock
	6	Stop Down button function	Stop down
	7	M.UP button function	Mirror up
	8	Control wheel direction	CW
	9	Flash ready exposure lock	Yes
	10	Magazine exposure lock	Yes
	11	Lens exposure lock	Yes
	12	Out of range exposure lock	No
	13	True exposure	On
	14	Spot mode	Normal
	15	Focus aid in MF	Half press
	16	AF assist light	Camera
	17	Rear wheel quick adjust	Yes
	18	Control lock	All controls
	19	Beeper	On
	20	Show histogram	Yes
	21	Interval & Selftimer	Exit
	22	AE-lock & Quick adjust	Exp. reset
	23	Show EV	Yes
	24	Show ISO	Yes
	25	Bracket param. in Manual	Shutter speed
	26	Aperture control in Manual	Front wheel
	27	Low flash warning	On
	28	Interval timer initial delay	None
	29	Aperture indicator	Normal
	30	Extra mirror-delay	50ms
	31	True Focus in AF-S	Off
	32	Always return mirror	No
	33	AE lock at half press	Off
	34	Hide B/T mode	Off

Problems, Equipment Care & Service

The H4X is a very sophisticated camera that relies on much information being passed and processed to and from each modular unit to produce the correct behavior. It is therefore essential that reasonable care is taken in attaching, detaching and storing the viewfinder, lenses, extension tubes, etc to ensure that the databus connections are not damaged or soiled in any way. Also when lifting or handling the camera try to always use the grip or strap and avoid holding the camera just by the digital back or viewfinder.

Warning messages are normally easily addressed and remedied but 'Error' messages require further attention as they denote a fault, temporary or otherwise. You should methodically investigate the situation to see for example whether the recent attachment of an accessory has coincided with the appearance of an error message. Standard procedure is to detach and re-attach the viewfinder, lens etc ensuring that they are positioned firmly and correctly to see whether the problem disappears. Failing that, removal of the battery grip for about ten seconds or so will reset the camera's processors. Persistent error messages might well signify a more complex problem and you are advised to contact your nearest Hasselblad Authorized Service Center for advice. You may receive a feedback report on either the grip display or the capture unit display. Please note this message carefully as it can facilitate support response greatly, as well as improve on firmware updates . As well as the error message, a description of the camera's behavior and an account of what action you were trying to take when it happened could be also beneficial. Also, please remember that if a hardware check is to be made, the Center will almost certainly want to inspect all of the items that were involved when the error message first appeared.

In certain situations, it is possible that the camera can be affected by a discharge of static electricity particularly if the area around the control buttons on the grip comes into contact with a conductive cord or material that is connected to earth, directly or indirectly (a lighting stand, for example). This might temporarily deactivate the camera though it does not cause any damage. Press the red ON.OFF button on the grip again to reactivate the camera.

If a problem does occur you are advised not to attempt any repairs yourself. Some service operations require very sophisticated instruments to check, measure and adjust and there is a real danger of creating more problems than solving them if such attempts are made in any other way.

EQUIPMENT CARE

A Hasselblad camera is designed to withstand the rigors of professional use in most environments. To avoid the possibility of damage however, it should be protected from harsh conditions and in particular avoid oil fumes, steam, humid conditions and dust.

Extremes of temperature: High temperatures can have an adverse effect equipment. Try to avoid frequent and severe temperature changes. Be particularly careful in humid environments. Allow the equipment to acclimatize before assembly. Try to ensure the storage conditions in such environments are as dry as possible.

Dust and grit: Take care to prevent dust and grit from getting into your equipment. In coastal areas take measures to protect your equipment from sand and salt water spray. Dust on the lens glass and focusing screen can be removed with a blower brush or very soft lens brush if necessary. Smears on the lens glass should be treated with great caution. In some cases they may be removed with a high quality lens cleaning solution on a tissue but be careful not to scratch the lens or touch any of the glass surfaces with your fingers. If in any doubt, do not attempt to clean lens glass surfaces yourself but allow a ***Hasselblad Authorized Service Center*** to treat them.

Impact: Your equipment can be damaged by severe physical shocks so practical protective precautions should be taken. Some form of protective case or camera bag is advised for transportation.

Loss: Hasselblad equipment is much sought after and you should take obvious steps to prevent theft. Never leave it visible in an unattended car, for example. Separate and specific camera insurance cover should be considered by professional users.

SERVICE

Return your equipment to a service centre for occasional checking and preventive maintenance to ensure optimal reliability. You can easily keep a check on service intervals by looking under 'Info' in the menu. If your camera is used constantly and intensively, regular periodic check-ups are recommended at one of the ***Hasselblad Authorized Service Centers***. They have the expert staff and specialised equipment necessary to ensure that your equipment remains in perfect working order.

CAUTION

- Keep all equipment and accessories out of the reach of small children.
- Do not place heavy objects on the equipment.
- Do not use the batteries except as specified.
- Use only the batteries specified for use with the camera.
- Remove the batteries when cleaning the camera or if you intend to leave the camera unused for a long period.
- If you use spare (standard or rechargeable) battery packs be particularly careful to use the supplied protective cap when storing. There is a potential fire risk if the contacts are short circuited across a conductive object (such as keys in a pocket, for example).
- Take particular care when working with strobe / studio flash units to prevent damage to equipment and personal injury.
- Do not attempt to open the digital back.
- Keep the digital back and all other computer equipment away from moisture. If the digital back becomes wet, disconnect from power and allow it to dry before attempting to operate again.
- Never cover the ventilation openings on the digital back.
- Always replace the protective CCD/filter cover when the digital back is not connected to the camera.
- Never try to remove the glass IR filter from the front of the CCD; this will probably ruin the CCD. If dust manages to get between the CCD and IR filter, please contact your Hasselblad dealer for assistance.

Disposal

Disposal of Waste Equipment by Users in Private Households in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can dispose of your waste equipment for recycling, please contact your local city office, your household waste disposal service or the retailer where you purchased the product.

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